REPORT RESUMES

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THE FLORIDA STUDY OF HIGHER EDUCATION FACILITIES--NEEDS FOR UNDERGRADUATE ACADEMIC SPACE. PREPARED FOR THE STATE COMMISSION OF THE HIGHER EDUCATION FACILITIES ACT OF 1963.

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TO PROVIDE THE NECESSARY INFORMATION FOR AN OVERALL DIRECTION IN EXPANDING THE PUBLIC, HIGHER EDUCATIONAL FACILITIES FOR THE STATE OF FLORIDA, THIS COMPREHENSIVE STUDY IS CONDUCTED TO--(1) COMPILE FACTUAL DATA WHICH MAY BE MADE AVAILABLE FOR USE IN EVALUATING APPLICATIONS FOR FINANCIAL ASSISTANCE TO CONSTRUCT ACADEMIC FACILITIES AT ELIGIBLE INSTITUTIONS, (2) PROVE AN OBJECTIVE ASSESSMENT OF THE ACADEMIC FACILITIES CURRENTLY AVAILABLE, AND (3) PROJECT THE NEEDS OF INDIVIDUAL INSTITUTIONS FOR THE YEAR 1970. FIVE MAJOR FACTORS ARE INVESTIGATED AND THE RESULTS RELATED TO THE DEVELOPMENT OF A STATE-WIDE MASTER PLAN. AN INVENTORY OF EXISTING FACILITIES IN THE FALL OF 1965, THE COURSE OFFERINGS AND COURSE ENROLLMENTS BY INSTITUTION, SPACE UTILIZATION RESEARCH, THE AGE, GENERAL CONDITION, AND RELATED ITEMS OF EXISTING FACILITIES AND A PROJECTION OF FULL-TIME EQUIVALENT STUDENT ENROLLMENTS FOR 1970 IS INCLUDED IN THIS STUDY. ALONG WITH THE PURPOSE, SCOPE, AND RESULTS OF THE FLORIDA STUDY, THE PROCEDURES USED FOR COMPILING THE DATA ARE PROVIDED AND THE RESULTS TABULATED IN TABLE FORM. THE APPENDICES CONTAIN THE DATA COLLECTION FORMS, INSTRUCTIONS FOR COLLECTING THE DATA AND DEFINITIONS APPLICABLE TO SPACE CLASSIFICATION AND UTILIZATION. THIS STUDY IS LIMITED TO INVESTIGATING FACILITY REQUIREMENTS AT UNDERGRADUATE LEVELS ONLY. (BH)

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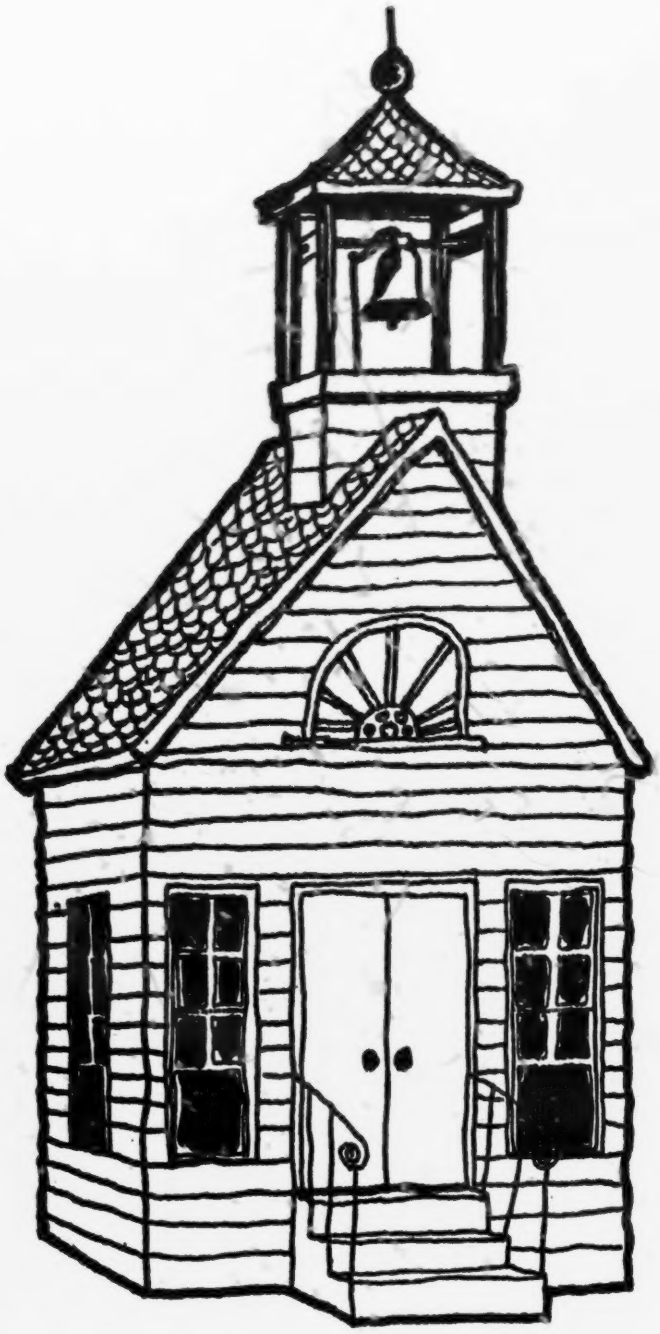

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TALLAHASSEE, FLORIDA

SURVEY CONDUCTED BY THE
ASSOCIATED CONSULTANTS IN EDUCATION
TALLAHASSEE, FLORIDA

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THE FLORIDA STUDY OF HIGHER EDUCATION FACILITIES:

Needs for Undergraduate Academic Space

Prepared for the State Commission
of the Higher Education
Facilities Act of 1963

U.S. DEPARTMENT OF HEALTH, EDUCATION & WELFARE
OFFICE OF EDUCATION

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CONSULTANTS
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Educational Planning Consultants

THE FLORIDA STUDY OF HIGHER EDUCATION FACILITIES:

Needs for Undergraduate Academic Space

Prepared for the State Commission
of the Higher Education
Facilities Act of 1963

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Dear Mr. Christian:

In compliance with our Agreement dated June 15, 1965, I am transmitting to you this Report of the Florida Study of Higher Education Facilities dealing with the needs of higher education institutions in Florida for undergraduate, academic physical facilities.

The Report covers all aspects of the problem as set forth in the Agreement referred to above. It provides analyses and summaries of data which we believe will be helpful to your staff and to the State Commission of the Higher Education Facilities Act of 1963 in the administration of the State Plan. It is our hope that it may be useful to your staff in making an objective assessment of the academic facilities which are currently available and in evaluating priorities of need for new construction for undergraduate academic facilities in the higher education institutions of the State.

We are indebted to numerous individuals, institutions and agencies for their splendid assistance and cooperation. Participating institutions have provided the data upon which this Report is based.

It is our sincere hope that the Report will be helpful to all concerned with the administration of the Higher Education Facilities Act of 1963.

Sincerely yours,

C. W. McGuffey
Executive Director

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CHAPTER I

BACKGROUND OF THE STUDY

Purpose and Scope of the Study

The continued expansion of facilities for junior colleges, four-year colleges and universities in the State of Florida is an accepted fact. Because of this expansion, Florida like many other states of the Nation, has participated in the program supported by the Higher Education Facilities Act of 1963 and its subsequent amendments. The Act provides financial assistance to colleges and universities in constructing approved projects for academic facilities.

The State's Higher Education Facilities Act program, while administered in an effective way, lacks the overall direction which can be provided by a study of the needs for facilities at individual participating institutions. The need for an analysis of facilities requirements by institution was recognized by those responsible for administering the program. Consequently, this study was requested as an administrative device to assist the Advisory Committee and the State Commission of the Higher Education Facilities Act of 1963 in evaluating priority factors which have been included in the State Plan for the Higher Education Facilities program.

More specifically, the Coordinator of the Higher Education Facilities Program requested this study for the following reasons:

1. To gather factual data which could be made available for use in evaluating applications for financial assistance to construct academic facilities at eligible institutions.
2. To provide an objective assessment of the academic facilities which are currently available

in the higher education institutions of the State.

3. To project the needs for academic facilities in each insititution of higher learning for the year 1970.

To accomplish the foregoing purposes, a study of the following factors has been made:

1. An inventory of existing buildings, classrooms, laboratories and other instruction rooms which were available and in use in the fall of 1965 by the various institutions of the State for academic purposes.
2. Course offerings and course enrollments by institution as a basis for determining the needs for specific facilities required to serve the instructional programs in the various institutions.
3. Space utilization in the several institutions as a basis for determining the current rates of student station utilization, sizes of classes, and the relationship of room types to courses taught in the rooms in use in the institutions of the State.
4. Age, general condition, type of construction, and the degree of permanence of space in existing buildings.
5. A projection of full-time equivalent student enrollments as a basis for projecting space needs for each institution in 1970.

Procedures Used in Making the Study

The procedures set forth in the plan for the Study have been followed by the study team. The procedures that were followed are discussed in the following paragraphs.

General

First, a letter was written to all institutions advising them of the proposed study and seeking their agreement to participate in the Study. Their cooperation in supplying pertinent data and information about their institution was also requested. Fifty-six institutions agreed to participate and fifty-four completed the data gathering forms and returned them to the Consultants.

Data gathering instruments were prepared by the Study Team. (See Appendix A for copies of the forms). The forms and instructions for their completion were then reviewed by a committee of persons representing the public junior colleges, the private institutions and the public higher education institutions. Suggestions were made for clarification of the instructions and for improving the data gathering forms. Subsequently, revisions were made in line with the suggestions by members of the committee.

In a few cases conferences were held with key college or university officials of larger institutions regarding the reporting of data. In at least two instances, the reporting of data was difficult due to complex building situations in which definitions or reporting instructions were inadequate to cover the more complex large university functions and their facilities. Conferences and supplementary instructions appeared to resolve these problems.

Data forms were completed by each institution and returned to the Study Team for review and tabulation. Forms were checked for obvious errors, and the data prepared for key punching. In some instances, forms were returned to the sender because of errors or incomplete data with the request that corrections be made or additional data be supplied.

Enrollment projections were prepared for each institution. The techniques that were used and the procedures that were followed are discussed in Chapter II of this Report.

Computer Analysis

A computer program was written to provide for the tabulation and compilation of the data submitted by the various institutions. These data were compiled into twenty-two tables with pertinent information about each institution. The computer performed all necessary computations and printed the results which are described in this Report.

Projection of Classroom and Laboratory Needs

The projections of classroom and laboratory needs for each institution in 1970 were made by the computer. Briefly the procedure was as follows:

The following data were collected for each course taught by an institution as of October, 1965.

1. The name of each course offered and whether it was a classroom-type or laboratory-type course.
2. The percentage of total student contact hours per week that was produced by each course.
3. The average size of class sections for each course.
4. The number and size of existing general classrooms and laboratories (by type) including those under contract as of October, 1965.

The following assumptions were made:

1. The percentage of the total student contact hours per week produced by each course in 1965 would remain constant for an institution through 1970.
2. The average class section size for each course would remain the same for an institution through 1970.
3. Instructional facilities would be available for 40 instructional hours per week for scheduling.

The projection of the full-time-equivalent student enrollment in 1970 for each institution was multiplied by 15 (the average full-time student semester hour load) to project the expected student contact hours per week as of 1970.

The following utilization factors were chosen as a basis of projecting general classroom and laboratory space needs for 1970:

Type of Institution	General Classrooms	Teaching Laboratories
Junior Colleges	70%	60%
Four-year degree-granting	60%	50%

By applying the percentage of the total student contact hours per week produced by each course to the expected contact hours per week for 1970, the expected number of student contact hours per week for each course was determined. For each course, this number was divided by the average class section size for the course. The result indicated the number of class groups per week in 1970 that would be needed to produce the expected number of contact hours.

At this point, the forty hours-available-for-scheduling-per-week factor was multiplied by the utilization factor, i.e. seventy per cent in the case of junior college general classrooms and sixty per cent for teaching laboratories. This product indicated the projected hours of use for individual classrooms and laboratories for junior colleges and the degree-granting institutions.

The number of expected hours of use per week were then divided by the number of class sections per week for each course. The space need for each course was then weighted against spaces available (including those under contract as of October, 1965) to determine the number of spaces which should be constructed by 1970.

Other Space Projections

The factors used in projecting other space needs for the year 1970 were drawn from the sources discussed in the several chapters. The enrollment projections are presented and explained in Chapter II. Factors used to compute utilization and space requirements for various types of facilities were derived in part from other studies with such adaptations and adjustments to Florida conditions as seemed warranted or derived from current norms found at existing institutions. At all points, the factors used were selected because they are considered to be the minimum necessary to produce education of high quality at the higher education level.

The narrative to accompany the tabular data was then drafted. The drafts were then reviewed by the General Consultant and final drafts prepared.

Where the Data Were Obtained

For the most part, data that are included in this report were obtained by means of data gathering instruments directly from the fifty-four institutions which agreed to participate in the study. The instruments used were adapted in part from similar ones used by team members in previous studies and from those recommended by Russell and Doi in their *Manual for Studies of Space Utilization in Colleges and Universities*.

Other sources of data were the Division of Research of the State Department of Education and the State Board of Regents.

Limitations of the Data

The data included in this study were gathered, compiled, and analyzed with considerable care. However, the magnitude of the problem of collecting the mass amount of data included herein and its compilation imposed obvious limitations on both those reporting the data and those compiling and analyzing it. However, there is much information in this report that will be of value to the various institutions which supplied data for the study. It is suggested that institutions will want to continuously evaluate and up-date the data and conduct more detailed individual studies to obtain the information they may need for planning their own physical plant requirements.

The data collected were not intended to include cost estimates; therefore, no attempt has been made to project costs of needed facilities.

The projections of classroom and laboratory needs were made on the basis of enrollments in current course offerings in the various institutions. As enrollments increase and as the structure of the American society and its technology changes, both course offerings and their enrollments could perhaps change sufficiently to affect space projections.

The projection of space needs was made on the basis of the current scheduling practices. As public institutions revise their schedules to return to the more conventional quarter plan, projections of space needs are most likely to be affected.

Space projections for classrooms and laboratories were based on specific assumptions with regard to student station utilization. Should the level of expectancy be increased or decreased from that assumed in this report, the space projections would be affected.

Only space needs for undergraduate academic facilities have been projected in this report. Attempts to report only that space assigned for undergraduate academic facilities have doubtlessly caused some subjective reporting on the part of some institutions, particularly the larger ones.

The foregoing discussion of limitations is an attempt to apprise the reader of the extent of usefulness of the data included in this report. It was not intended that this report be used for purposes other than those outlined in the early part of this Chapter. The data are not intended to be definitively explicit. The findings of this report are valid for the purpose of drawing broad conclusions about physical plant needs of the institutions included in this study and should provide sufficient information to evaluate applications for the expansion of physical plant space on a relative bases.

Definitions

The definitions of terms used in this report are included in Appendix A. These definitions are for the most part the same as those included in OE-51008, "Financial Assistance for Construction of Higher Education Facilities," Regulations of the Higher Education Facilities Act of 1963.

Coding of Institutions

Participating institutions requested that the results of this Study be kept as confidential as possible. Consequently, the decision was made to use a coding system with a numerical code to represent each institution. A number code was also needed for each institution in the development of the computer program used in the study. The numerical code for each institution is available in the office of the Coordinator of the Higher Education Facilities Program.

CHAPTER II

PRESENT AND PROJECTED UNDERGRADUATE ENROLLMENTS IN FLORIDA COLLEGES AND UNIVERSITIES

Introduction

It is the purpose of this chapter to present projections of the number of full-time equivalent students who will be enrolled in undergraduate study in the colleges and universities of the state in 1970-71. All post-secondary public institutions and sixteen of the private institutions which offer curricula leading to, or terminating with a bachelor's degree are included. Enrollments in technical programs and terminal programs in junior colleges and other institutions having degree curricula are included. Enrollments in similar programs in technical and vocational schools and business colleges which do not maintain college preparatory or degree programs are not included.

The projections are made in terms of full-time equivalent students (FTE).[1] The number is obtained by dividing the total credit hours of registration by 15. The FTE enrollment has the merit of being uniform over all institutions and is quite appropriate for estimating instructional and most physical plant needs.

The total enrollment in most institutions is a larger figure because it is simply a headcount of the individual registrants, many of whom are carrying less than 15 credit hours of work. The total enrollment is no doubt a more appropriate index of the load of the registrar, placement and counseling and similar offices than is FTE because each and every individual must be serviced. In general, such services are a minor portion of the responsibilities of the institutions covered in this study and hence FTE which is derived from credit hours of instruction is used in this report.

The cohort survival technique was used in making basic projections. Briefly this technique utilized the enrollment, or other appropriate data, over an immediately past span of years to determine the typical experience of a specified group or class in moving through the program of an institution. On the assumption that the experience of furture groups or classes will be quite similar, the past experience, expressed as a ratio or percentage of survival, was applied to future groups or classes.

---

[1] The FTE enrollment in an institution is defined as the number who would be enrolled if all were carrying 15 credit hours of work per term.

For purposes of this study, the past span of years was generally five or six. This period appeared to give a rather stable index and at the same time represented reasonably current conditions. In each instance, the investigators attempted to derive the index that would best represent the experience of each institution rather than developing a uniform mathematical formula and applying it to all sets of data.

The projected enrollments that are presented are subject to errors associated with indices, per se, and to errors associated with the basic assumption that the future will be similar to the past. The errors of the first type will be random and probably small. The errors of the second type will be systematic. The projections will be systematically too large if economic and social conditions cause a decrease in the rate of migration of families into the state. A decrease in the proportion of the State's population who seek post-high school education in institutions of the types covered in this study could also occur. If the opposite conditions obtain, the projections will be systematically smaller than the actual enrollments. This has been the case with prior projections made for the State of Florida and may well be true for this study.

The presentation of the projected enrollments is divided into two sections. The first, immediately following, deals with projected high school graduates, and the second with projected post-secondary school enrollments. The projected number of high school graduates is indicative of the number of people to be served by the colleges. The projected post-secondary school enrollments are indicative of the number who will seek college level instruction. The projected enrollments have been further reported in terms of the number who will seek instruction in the several types of institutions, and in each of the several specified institutions.

Projected Number of High School Graduates

A large majority of students entering Florida colleges during any given year were graduates from Florida high schools at the close of the preceding academic year. The remainder were persons who have delayed college entrance by one or two years or longer; persons who dropped out of college and are returning; out-of-state students; and a few non-high school graduates who have otherwise qualified for admission. Under stable social and economic conditions the proportionate relationship of each of the latter groups relative to the preceding year's high school graduates should not vary significantly. Therefore, the number of high school graduates may be used as basic data for the projection of college enrollment.

The primary projection of high school graduates was made by county school unit. The county, and not the attendance area, is the legal school unit in Florida. Projections were made for each county separately because of the wide variability among counties with respect to rates of change in the number of high school graduates. County data also were needed because the legal service area for each public junior college is specified in terms of counties. Bases for projected enrollments in the other institutions and for the total state may be obtained by cumulating the appropriate county data.

The projected number of high school graduates in each county was made on the basis of the experience over the eight academic years beginning in 1957 and closing in 1965. This period was chosen to permit the identification of enrollment trends by grades, of trends in twelfth grade graduation practices, and of trends in the relationships between the number of high school graduates and enrollments in specific post-secondary institutions, or types of institutions. Each trend was expressed as a constant, or as a systematically changing index number based upon the set of past relationships which seemed most likely to carry forward until 1970.

Projected state-wide numbers of high school graduates were made independently on the basis of state-wide public school enrollments and by cumulating the 67 county projections. These two estimates differed by only a small number which could be readily attributed to rounding errors.

The number of high school graduates in the State in the academic years 1963-64 and 1964-65 and the projected number of graduates over the six year period, 1965-66 to, and including, 1969-70 are shown in Table 1.

TABLE 1

NUMBER OF FLORIDA HIGH SCHOOL GRADUATES: ACTUAL NUMBER 1963-65; PROJECTED NUMBER 1966-70

Year	No. Graduates	Annual Increase	Annual Percentage Increase	Per Cent Increase over 1963-64
1963-64	53,873	---	---	---
1964-65	60,920	7,047	13.8	13.8
1965-66	61,683	763	1.3	14.5
1966-67	62,405 (P)	722	1.2	15.9
1967-68	63,726 (P)	1,321	2.1	18.4
1968-69	67,917 (P)	4,191	6.6	26.1
1969-70	71,753 (P)	3,836	5.7	33.1

(P) Projected

The most noticeable detail in Table 1 is the decline in the annual rate of increase from 13.8 per cent in 1964-65 to 1.3 per cent in 1965-66. In part, this decline in the annual rate of increase is due to the end of the flow through public school of children born during the war years. The war years were a period of rapidly accelerating birth rates. The graduates of 1966-70 were born during a period of relatively high, but not rapidly increasing birth rates.

The projected decrease is also an artifact of the method by which estimates were made in this study. This method required that an index representative of a prior span of years be devised and used for projecting future numbers of graduates.

It is possible that the index devised is too conservative, and if so, the number to be graduated in 1970 will prove to be greater than the 71,753 indicated in this report.

For purposes of computing percentage increases, the number of graduates of the year 1963-64 was used. The graduates of this class who entered college in the fall following graduation were sophomores in 1965-66 and those who delayed entrance by one year were freshmen. Using this group as a base, the estimate of the increase by 1970 amounts to 33 per cent for the State as a whole.

While the total number of high school graduates is a quite consistently increasing number over the period studied, the rates of growth, and hence the number of graduates, in the several counties have varied widely in the past and will vary more widely in future years. If the present patterns and trends in land use do not change, a number of the presently small counties will experience no significant increase in their number of high school graduates. If the same patterns and trends do not change, other counties will experience large increases, both proportionately and absolutely. The number of graduates of the high schools in each county is shown in Table 2.

The differences among the several counties with respect to growth and to their proportionate share of the State's population may be illustrated by observing that Brevard and Dade counties combined will account for approximately 25 per cent of the State's increase in the number of high school graduates. Broward, Pinellas and Orange will account for a second fourth, Duval, Palm Beach, Hillsborough and Volusia will account for a third fourth. These nine counties will experience 75 per cent of the State's increase and will graduate 70 per cent of the students. If to these nine counties, Alachua, Escambia, Leon, Polk, and Sarasota are added, the fourteen will account for 84 per cent of the increase in the number of graduates and 78 per cent of the total number of students graduating from high school.

The remaining fifty-three counties are those which will graduate fewer than 1,000 students each in 1970. Of these, eight

TABLE 2

NUMBER OF FLORIDA HIGH SCHOOL GRADUATES BY COUNTIES: ACTUAL NUMBER 1963-64; PROJECTED NUMBER 1969-70

County	Years 1963-64	Years 1969-70	Increase 1964-70	Percentage Increase 1964-70
Alachua	842	1,111	269	31.9
Baker	91	96	5	5.5
Bay	734	781	47	6.4
Bradford	200	193	-07	-3.5
Brevard	1,855	4,519	2,664	143.6
Broward	3,586	5,431	1,845	51.5
Calhoun	106	86	-20	-18.9
Charlotte	103	156	53	51.5
Citrus	86	179	93	108.2
Clay	218	279	61	28.0
Collier	151	255	104	68.9
Columbia	268	348	80	29.9
Dade	9,444	11,663	2,219	23.5
DeSoto	111	131	20	18.0
Dixie	67	70	3	4.5
Duval	5,068	6,237	1,169	23.1
Escambia	1,870	2,256	386	20.6
Flagler	48	57	9	18.8
Franklin	55	59	4	7.3
Gadsden	390	461	71	18.2
Gilchrist	63	51	-12	-19.0
Glades	29	36	7	24.1
Gulf	113	130	17	15.0
Hamilton	117	108	- 9	- 7.7
Hardee	147	138	- 9	- 6.1
Hendry	83	129	46	55.4
Hernando	99	144	45	45.5
Highlands	242	271	29	12.0
Hillsborough	4,228	5,235	1,007	23.8

TABLE 2--Continued

County	Years 1963-64	 1969-70	Increase 1964-70	Percentage Increase 1964-70
Holmes	149	134	-15	-10.1
Indian River	285	407	122	42.8
Jackson	467	479	12	2.6
Jefferson	135	145	10	7.4
Lafayette	33	41	8	24.2
Lake	605	686	81	13.4
Lee	679	940	262	38.6
Leon	836	1,062	226	27.0
Levy	136	155	19	14.0
Liberty	47	43	- 4	- 8.5
Madison	203	216	13	6.4
Manatee	752	984	232	30.9
Marion	717	963	246	34.3
Martin	162	245	83	51.2
Monroe	366	386	20	5.5
Nassau	230	260	30	13.0
Okaloosa	679	902	223	32.8
Okeechobee	75	134	59	78.7
Orange	2,931	4,134	1,203	41.0
Osceola	211	260	49	23.2
Palm Beach	2,261	3,295	1,034	45.7
Pasco	326	381	55	16.9
Pinellas	3,562	5,119	1,557	43.7
Polk	2,196	2,496	300	13.7
Putnam	414	456	42	10.1
St. Johns	261	314	53	20.3
St. Lucie	364	513	149	41.1
Santa Rosa	312	333	21	6.7
Sarasota	891	1,228	337	37.8
Seminole	539	899	360	66.8

TABLE 2--Continued

County	Years		1964-70 Increase	Percentage Increase 1964-70
	1963-64	1969-70		
Sumter	149	205	56	37.6
Suwannee	227	244	17	7.5
Taylor	137	166	29	21.2
Union	55	57	2	3.6
Volusia	1,634	2,417	783	47.9
Wakulla	65	75	10	15.4
Walton	200	213	13	6.5
Washington	169	156	- 13	- 7.7
Totals	53,873	71,753	17,880	33.2

(Bay, Lake, Lee, Manatee, Marion, Okaloosa, Seminole, and St. Lucie) will graduate 500-1000 students each. As a group, they will account for approximately 9 per cent of the increase and will graduate approximately 9 per cent of the students finishing high school. Thirty-four counties will graduate 100-500 students each in 1970, and eleven fewer than 100 each. The thirty-four will account for almost all of the remaining 9 per cent increase in the State because the eleven combined will graduate only 12 more students in 1970 than they did in 1964. The forty-five counties graduating fewer than 500 students each, as a group will produce 12 per cent of the State's high school graduates.

A basic consideration is the manner in which the high school graduates are distributed among the twenty-six public junior college legal service areas. Each service area is made up of one or more counties and together they include 54 of the State's 67 counties. The number of graduates in counties within community junior college service areas and outside community junior college service areas may be summarized as follows:

	1963-64	1969-70	Increase 1964-70 Number	Increase 1964-70 Per Cent	1969-70 Per Cent of Total
Within	48,360	64,373	16,013	33.11	89.7
Outside	5,513	7,380	1,867	33.80	10.3
Total	53,873	71,753	17,880	33.20	100.0

The number of high school graduates in 1963-64, the projected number to be graduated in 1969-70, and the increase in number and in percentage over this time span are reported in Table 3 for each junior college area. The numbers of graduates are shown graphically in Figure 1.

TABLE 3

NUMBER OF HIGH SCHOOL GRADUATES BY JUNIOR COLLEGE LEGAL SERVICE AREA; ACTUAL NUMBER 1963-64; PROJECTED NUMBER 1969-70[1]

Jr. College Area	High School Graduates 1963-64	High School Graduates 1969-70	Increase 1964-70	Per Cent Increase 1964-70
Miami-Dade	9,444	11,663	2,219	23.5
Duval-Nassau	5,298	6,497	1,199	22.6
Broward	3,586	5,431	1,845	51.5
Hillsborough	4,228	5,235	1,007	23.8
St. Petersburg and Gibbs	3,562	5,119	1,557	43.7
Brevard	1,855	4,519	2,664	143.6
Palm Beach and Roosevelt	2,261	3,295	1,034	45.7
Pensacola and Washington	2,182	2,589	407	18.7
Polk County	2,196	2,496	300	13.7
Daytona Beach and Volusia County	1,682	2,474	792	47.1
Edison	932	1,351	419	45.0
Alachua-Bradford	1,042	1,304	262	25.1

TABLE 3--Continued

Jr. College Area	High School Graduates 1963-64	High School Graduates 1969-70	Increase 1964-70	Per Cent Increase 1964-70
Indian River & Lincoln	886	1,299	413	46.6
Central Fla. & Hampton	939	1,297	358	38.1
Leon-Wakulla	901	1,137	236	26.2
Okaloosa-Walton	879	1,115	236	26.8
St. Johns River	893	1,049	156	17.5
Manatee	752	984	232	30.9
Seminole	539	899	360	67.2
Lake-Sumter & Johnson	754	891	137	18.2
Gulf Coast & Rosenwald	734	781	47	6.4
Chipola & Jackson	891	855	- 36	- 4.0
North Florida & Suwannee	625	676	51	8.2
Lake City Junior College & Forest Rang.	544	622	78	14.3
Highlands-Hardee	389	409	20	5.1
Monroe	366	386	20	5.5
	48,360	64,373	16,013	33.11

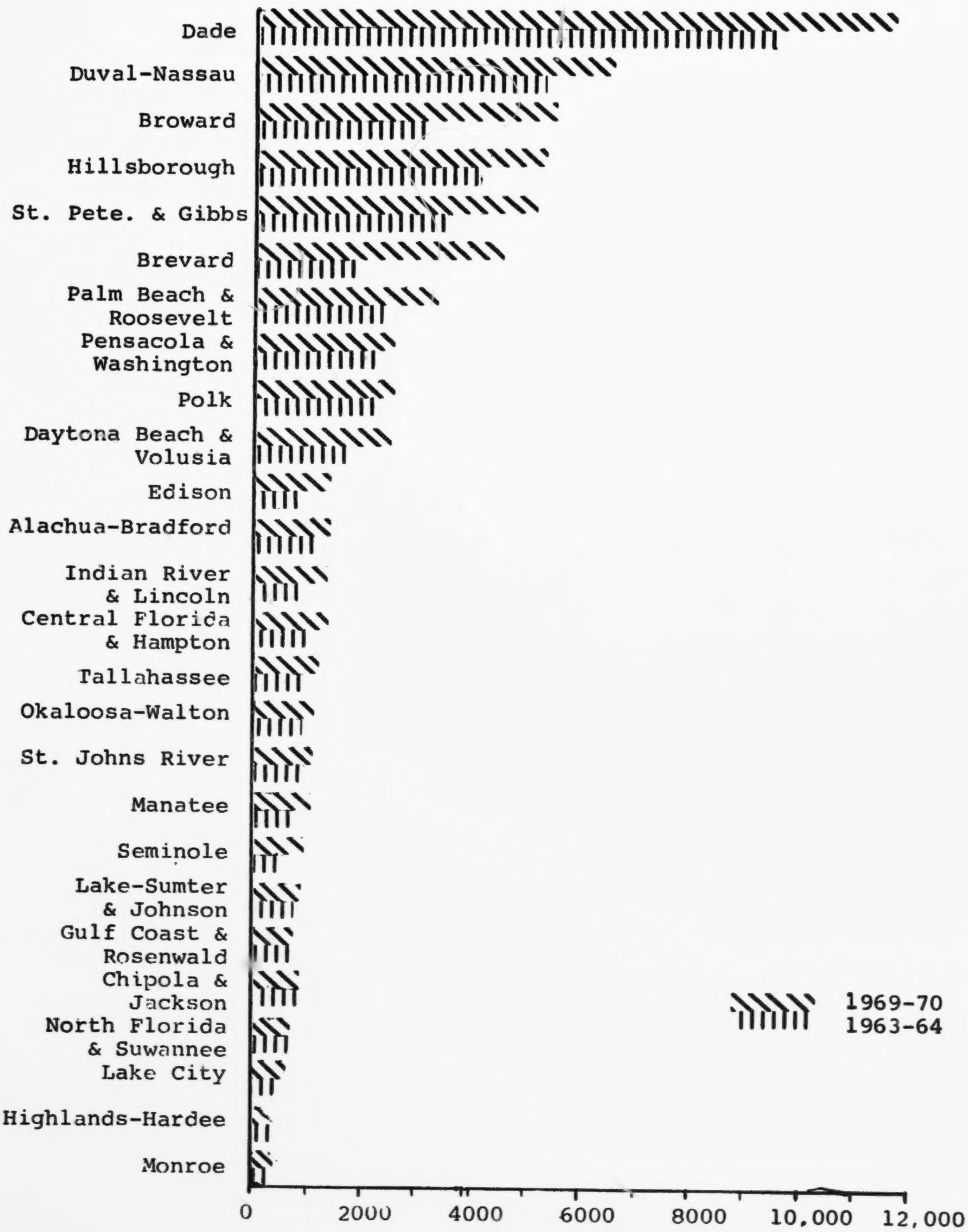
[1] Junior College for Orange County authorized in 1961 but no action on part of local board to establish it.

Had all of these junior colleges been in operation in September, 1965, they would have served 89.7 per cent of the high school graduates of the previous June. By 1970, they will also be accessible to 89.7 per cent of the graduates. Furthermore, their service areas make up the portions of the State which will experience 90.1 per cent of the increase in the number of high school graduates.

The service areas are heterogeneous with respect to the number of graduates residing within their borders. The seven

FIGURE 1

NUMBER OF HIGH SCHOOL GRADUATES IN JUNIOR COLLEGE SERVICE AREAS: ACTUAL NUMBER 1963-64; PROJECTED NUMBER 1969-70



largest will account for 64.7 per cent of the graduates in established junior college areas in 1970. The next three will account for 11.7 per cent. Thus 76.6 per cent of the high school graduates in established junior college areas will reside in the service areas of ten colleges. A group of seven colleges, each of which is estimated to have more than 1,000 and fewer than 2,000 graduates in its area will serve 13.3 per cent of the Junior College Service area graduates. In the remaining nine service areas the projected number of graduates ranges from 386 to 984. As a group, they account for approximately 10.1 per cent of the projected number of graduates in Junior College Areas.

Thirteen counties are not included in Junior College Service Areas. In 1970 it is estimated that these counties will graduate 7,380 students, or 10.3 per cent of the projected total number to be graduated in the State. The distribution of graduates among these thirteen counties is reported in Table 4 and presented graphically in Figure 2.

Four of the thirteen counties, Orange, Sarasota, Gadsden,[2] and Pasco, fall within the approximate range of the number of graduates in established service areas. These four as a group account for 84.1 per cent of the estimated number to be graduated in 1970 in counties not in community college service areas. The remaining nine counties will graduate an estimated 36 to 260 students each. Their combined graduates make up 15.9 per cent of the number in non-service areas and 1.6 per cent of the projected number of graduates in the State as a whole in 1969-70.

Projected Undergraduate, Non-Professional FTE Students 1970-71

The undergraduate full time equivalent student enrollment (excluding law and medicine) in the Florida collegiate grade institutions included in this study is projected to total 180,692 in the academic year 1970-71. This projection is based upon the yearly number of high school graduates from 1958-59 to

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[2] Subsequent to the preparation of this Report, Gadsden has joined with Leon and Wakulla Counties to support Tallahassee Junior College.

TABLE 4

NUMBER OF HIGH SCHOOL GRADUATES IN COUNTIES NOT INCLUDED IN ANY COMMUNITY JUNIOR COLLEGE SERVICE AREA: ACTUAL NUMBER 1963-64; PROJECTED NUMBER 1969-70

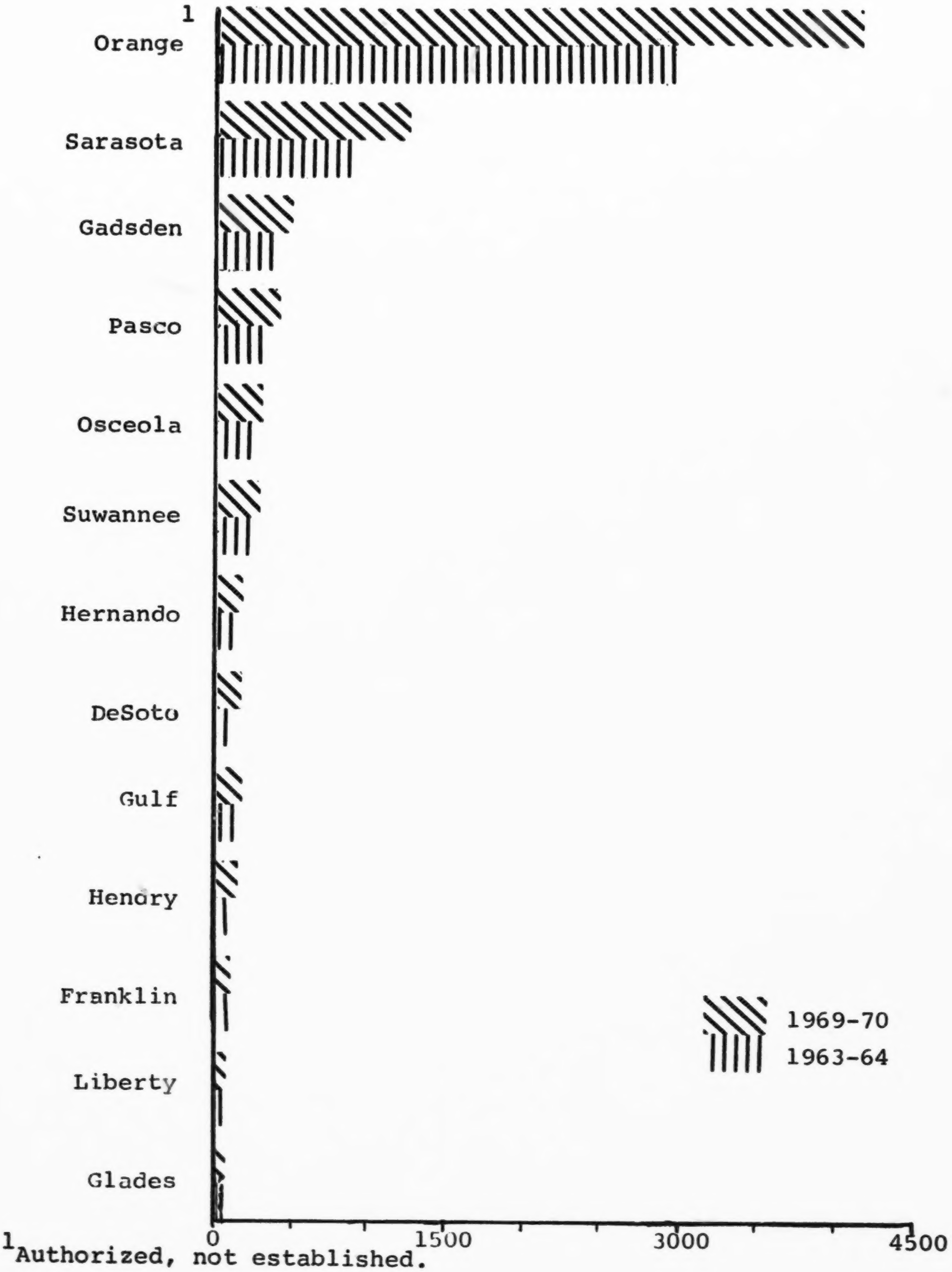
County	Years		Increase	Percentage Increase
	1963-64	1969-70	1964-70	1964-70
DeSoto	111	131	20	18.0
Franklin	55	59	4	7.3
Gadsden	390	461	71	18.2
Glades	29	36	7	24.1
Gulf	113	130	17	15.1
Hendry	83	129	46	55.5
Hernando	99	144	45	45.5
Liberty	47	43	- 4	- 8.6
Orange (authorized, not established)	2,931	4,134	1,203	41.2
Osceola	211	260	49	23.1
Pasco	326	381	55	16.8
Sarasota	891	1,228	337	37.8
Suwannee	227	244	17	7.5
Totals	5,513	7,380	1,867	33.8

1970-71 and the post-secondary school enrollments from 1960-61 to 1965-66, using the cohort survival technique.

The collegiate grade institutions include those in the State University System, the Community Junior Colleges of the State, and sixteen non-tax supported colleges and universities operated under private auspices. In 1960 all of these institutions together enrolled 50,306 FTE students; and in 1964 they enrolled 88,591. The increase over the four year period amounted to 76.1 per cent, and the projected increase to 180,692 in 1970 amounts to 104 per cent over the ensuing six year period.

FIGURE 2

NUMBER OF HIGH SCHOOL GRADUATES IN COUNTIES NOT INCLUDED IN ANY COMMUNITY JUNIOR COLLEGE SERVICE AREA: ACTUAL NUMBER 1963-64; PROJECTED NUMBER 1969-70



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[1] Authorized, not established.

The resources for college level education in Florida have long been provided by the State through its University System and by non-tax supported institutions operating under private and church related auspices. Legal provision was made for a Community Junior College system in 1957 and the junior colleges were making a very important contribution to the total program by 1960. The relative contribution of the three classes of institutions to the total higher educational program in Florida is shown in Figure 3.

The private institutions enrolled 16,959 FTE students in 1960, 19,056 in 1964, and their projected enrollment in 1970 amounts to 26,283. This is an increase of 9,324 FTE students, or 55 per cent in a decade.

The university system enrolled 21,475 FTE students in 1960, 30,152 in 1964, and its projected 1970 enrollment is 48,436. This amounts to an increase of 125 per cent in a decade and does not include the expanded enrollments at the graduate level.

The Community Junior College System which was in its early development stage in 1960 enrolled 11,872 FTE students at the beginning of the decade. By 1964, it enrolled 39,383 and its 1970 projected enrollment is 105,973. The projected enrollment amounts to an increase of 790 per cent in one decade.

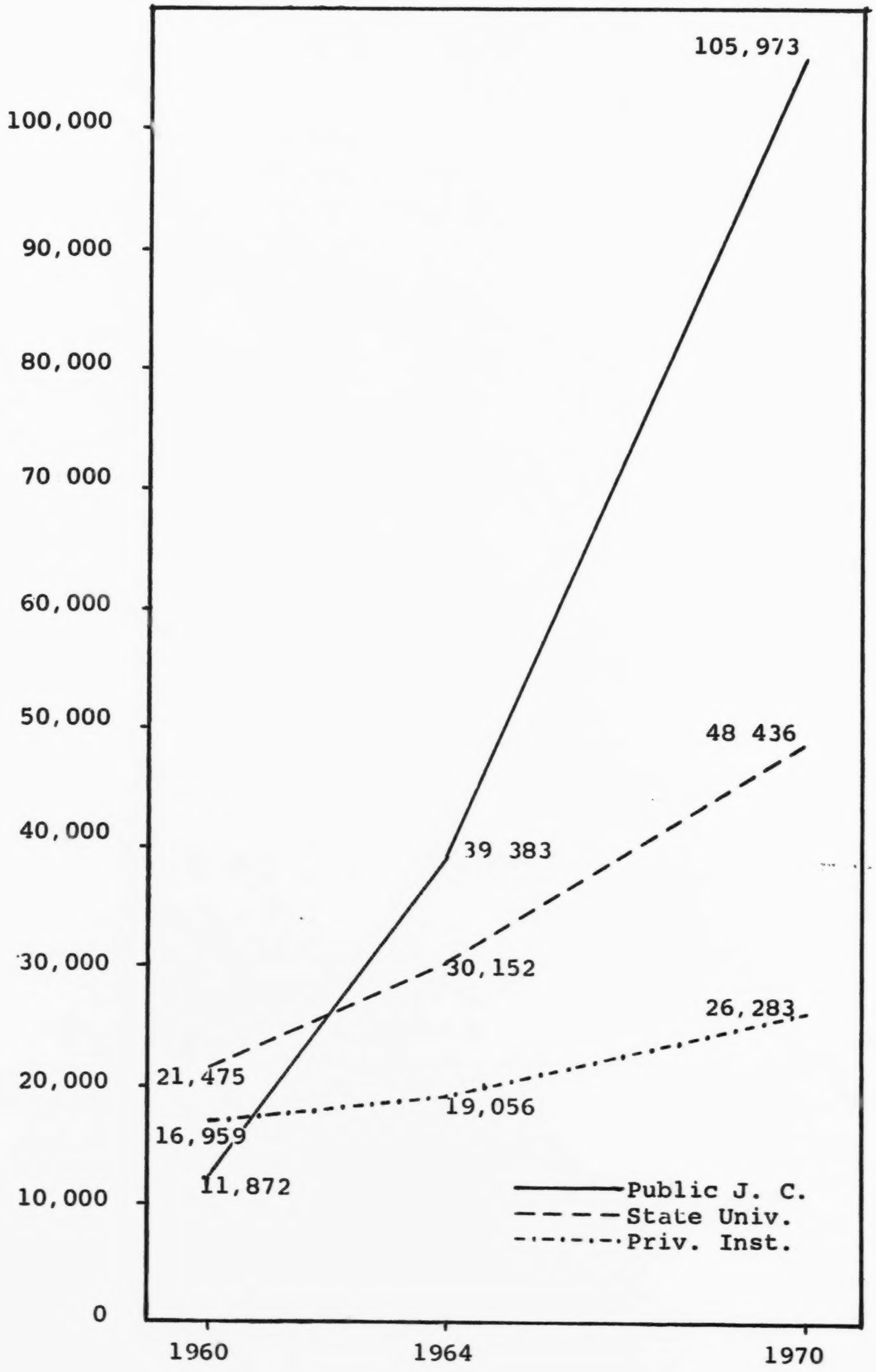
The proportion of the total number of students in each group of higher educational institutions is reported in the following percentages:

	1960	1964	1970
State Universities	42.7	34.0	26.8
Private Institutions	33.7	21.5	14.5
Community Junior Colleges	23.6	44.5	58.7

It is apparent that the community junior colleges will probably enroll 58.7 per cent of the post-high school students by 1970, that the universities will enroll slightly

FIGURE 3

FTE ENROLLMENTS BY TYPES OF FLORIDA COLLEGIATE INSTITUTIONS; ENROLLMENT 1960 AND 1964; PROJECTION 1970



more than one-fourth of such students and the private institutions will enroll about one in seven college students by 1970. The distribution of the enrollments among the several colleges and universities within each group is reported in the sections following.

Community Junior Colleges

In 1960, there were 22 community junior colleges enrolling students; in 1964 there were 29, and by 1970, the projected number to be in operation is 26. Within the six-year interval from 1964 to 1970 the opening of seven new community junior colleges is projected. During the same period, it is anticipated that ten small colleges will be closed and their student bodies transferred to the larger college serving the same service area. Specifically, the following mergers are anticipated:

Hampton with Central Florida
Jackson with Chipola
Johnson with Lake-Sumter
Roosevelt with Palm Beach
Lincoln with Indian River
Rosenwald with Gulf Coast
Suwannee with North Florida
Volusia with Daytona Beach
Washington with Pensacola
Gibbs with St. Petersburg

The enrollments will vary from college to college and their rates of growth will also vary greatly. The enrollment data for each community junior college are reported in Table 5 in the order of projected 1970 FTE enrollment.

The data in column one of Table 5 show the 1960 enrollment; in column two the 1964 enrollment; and in column four the increase which has occurred between 1960 and 1964. In 1960 the enrollment ranged from 53 to 2,292. By 1964, the range extended from 90 to 10,187 and seven new colleges had been opened. The increase ranged from 12 to 8,969 during this four year interval.

The data in column three show the projected 1970 FTE enrollment in each community junior college and those in column five the projected increase between 1964 and 1970. The projected enrollments range from 350 to 29,920. Miami-Dade with 29,920 FTE students will have more than three times the enrollment of any other Community Junior College. The St. Petersburg

TABLE 5

FTE COMMUNITY JUNIOR COLLEGE ENROLLMENT 1960, 1964 AND 1970; AND INCREASES IN ENROLLMENT 1960-64 and 1964-70[1]

Name	FTE Enrollment 1960	FTE Enrollment 1964	FTE Enrollment 1970	FTE Increase 1960-64	FTE Increase 1964-70
Miami-Dade	1,218	10,187	29,920	8,969	19,733
St. Petersburg	2,292	5,262	9,059	2,970	3,797
Broward	506	2,587	8,937	2,081	6,350
Brevard	423	1,813	6,518	1,390	4,705
Duval-Nassau	---	---	5,702	---	5,702
Palm Beach	1,293	2,940	4,907	1,647	1,967
Pensacola	1,427	2,592	4,889	1,165	2,297
Daytona Beach	463	1,305	4,204	842	2,899
Hillsborough	---	---	4,134	---	4,134
Manatee	732	1,579	3,390	847	1,811
Polk	---	723	3,048	723	2,325
Central Fla.	404	1,015	2,750	609	1,735
Gulf Coast	357	930	2,021	573	1,091
Lake-Sumter	---	421	2,004	421	1,583
Edison	---	639	1,953	639	1,314
Indian River	188	487	1,695	299	1,208
St. Johns River	297	1,432	1,595	1,135	163
North Florida	277	633	1,509	356	876
Lake City and Forest Ranger	---	616	1,421	616	805
Okaloosa-Walton	---	431	1,394	431	963
Chipola	505	906	1,312	401	406
Alachua-Bradford	---	---	1,015	---	1,015
Tallahassee	---	---	915	---	915
Seminole	---	---	713	---	713
Florida Keys	---	---	618	---	618
Highlands-Hardee	---	---	350	---	350
Gibbs	567	808	---	241	- 808

TABLE 5--Continued

Name	FTE Enrollment			FTE Increase	
	1960	1964	1970	1960-64	1964-70
Volusia	205	429	---	224	- 429
Hampton	163	304	---	141	- 304
Washington	169	302	---	133	- 302
Johnson	---	258	---	258	- 258
Suwannee	105	256	---	151	- 256
Roosevelt	160	172	---	12	- 172
Lincoln	53	157	---	104	- 157
Rosenwald	68	109	---	41	- 109
Jackson	---	90	---	90	- 90
Orange (authorized, not established)	---	---	---	---	---
Totals	11,872	39,383	105,973	27,511	66,590

[1] No enrollment data are reported in columns one or two for colleges which had not opened by 1960 or by 1964, as the case may be.

No enrollment data are reported in column three for each of ten colleges because each of these colleges is expected to be merged with the larger college in its respective service area. For each of these colleges, its 1964 enrollment is reported as a loss in column five, thus balancing the portion of the increase in the receiving college attributable to the transfer of a number of students equal to the 1964 enrollment of the college that is expected to be closed.

No enrollment data are reported for Orange. While it has been authorized, it has not been established and there appeared to be no sound basis for the estimation of its 1970 enrollment.

Broward County, Brevard, and Duval-Nassau Community Junior Colleges combined will account for another 30,200 students and each will enroll more than 5,000. Palm Beach, Pensacola, Daytona Beach, Hillsborough, Manatee, and Polk Community Colleges will enroll 3,000 to 5,000 FTE students each, and together they will enroll approximately 24,600.

Eleven colleges will have enrollments ranging between 1,000 and 3,000 and four will enroll fewer than 1,000 FTE students. The eleven colleges enrolling between 1,000 and

3,000 students will accommodate approximately 18,700 FTE enrollees and the four enrolling fewer than 1,000 will accommodate approximately 2,600.

The projected increases shown in the last column tend to show a positive correlation with the projected 1970 enrollment. The degree of correlation is reduced by the tendency of the newer colleges to experience rapid growth during the five or six years following their opening and by the tendency for the older colleges to decrease in their rate of growth after their programs have been established and their maximum level of service to their communities have been attained.

The Community Junior College projected enrollment in 1970 is 105,973 FTE students and the projected increase between 1964 and 1970 is 66,590. The percentage of the total state enrollment and of the total state increase which each of the colleges may be expected to accommodate are reported in Table 6. These data indicate that by 1970, Miami-Dade will enroll 28.2 per cent of the Community Junior College students in the State and between 1964 and 1970 it will enroll 29.6 per cent of the total state increase. The remaining twenty-five colleges which will be in operation in 1970 will enroll smaller percentages of the students and will increase less rapidly. The twenty-two colleges which individually will enroll 1 per cent or more of the students, collectively will enroll 97.5 per cent of the total. The four individually enrolling fewer than 1 per cent of the State's total, collectively will enroll 2.5 per cent of the students. Each of twenty-two colleges will accommodate 1 per cent or more of the net increase in enrollment and collectively they will enroll approximately 98 per cent of the increase. Four will enroll 2 per cent of the net increase.

The 1964 enrollment in the ten colleges which presumably will be closed amounts to 4 per cent of the projected

TABLE 6

PERCENTAGE OF THE TOTAL, 1970 FTE COMMUNITY JUNIOR COLLEGE ENROLLMENT AND OF THE INCREASE (1964-70) PROJECTED FOR EACH OF THE PUBLIC JUNIOR COLLEGES

Name	Percentage FTE 1970	Percentage Increase FTE (1964-70)
Miami-Dade	28.2	29.6
St. Petersburg	8.5	5.7
Broward	8.4	9.5
Brevard	6.2	7.1
Duval-Nassau	5.4	8.6
Palm Beach	4.6	3.0
Pensacola	4.6	3.4
Daytona Beach	4.0	4.4
Hillsborough	3.9	6.2
Manatee	3.2	2.7
Polk	2.9	3.5
Central Florida	2.6	2.6
Gulf Coast	1.9	1.6
Lake-Sumter	1.9	2.4
Edison	1.8	2.0
Indian River	1.6	1.8
St. John's River	1.5	0.2
North Florida	1.4	1.3
Lake City and Forest Ranger	1.3	1.2
Okaloosa-Walton	1.3	1.4
Chipola	1.2	0.6
Alachua-Bradford	1.0	1.5
Tallahassee	0.9	1.4
Seminole	0.7	1.1
Florida Keys	0.6	0.9
Highlands-Hardee	0.3	0.5
Gibbs	0.0	- 1.2
Volusia	0.0	- 0.6

TABLE 6--Continued

Name	Percentage FTE 1970	Percentage Increase FTE (1964-70)
Hampton	0.0	- 0.5
Washington	0.0	- 0.5
Johnson	0.0	- 0.4
Suwannee	0.0	- 0.4
Roosevelt	0.0	- 0.3
Lincoln	0.0	- 0.2
Rosenwald	0.0	- 0.2
Jackson	0.0	- 0.1

net increase. Since this number of students must be added to the net increase to be accommodated, the twenty-six colleges in operation in 1970 must necessarily accommodate 104 per cent of the net increase over 1964.

State University System

The State university system included four institutions enrolling 21,475 FTE undergraduate students in 1960; five institutions enrolling 30,152 in 1964; and is projected to include seven institutions and to enroll 48,436 FTE undergraduate students (exclusive of students in law and medicine) in 1970. The data in Table 7 report the enrollments and the increases in each of the existing and authorized universities.

The data in column one report the 1960 FTE enrollment, those in column two the 1964 enrollment, and those in column four the increase from 1960-64. Four universities were in operation in 1960. Their enrollments ranged from 1,397 to 9,454. By 1964 a fifth university was in operation, and the enrollments ranged from 598 to 12,033 Full Time Equivalent students. Between these dates, each institution

TABLE 7

FTE STATE UNIVERSITY UNDERGRADUATE ENROLLMENT 1960, 1964 AND 1970; AND INCREASES IN ENROLLMENT 1960-64 AND 1964-70[1]

Name	FTE Enrollment 1960	FTE Enrollment 1964	FTE Enrollment 1970	FTE Increase 1960-64	FTE Increase 1964-70
U of F	9,454	12,033	13,535	2,579	1,502
USF	1,397	5,132	10,486	3,735	5,354
FSU	7,838	9,538	10,276	1,700	738
Fla. Atl. U.[2]		598	4,888	598	4,290
FAMU	2,786	2,851	3,469	65	618
U of W. Fla.			3,180		3,180
Fla. Tech. U.			2,602		2,602
Totals	21,475	30,152	48,436	8,677	18,284

[1] Actual data obtained from institutions' reports submitted for analysis.

[2] Fall, 1965 FTE was 1,531; 1964 was the first year of operation.

had increased in enrollment. The increases ranged from 65 at the Florida Agricultural and Mechanical University to 3,735 at the University of South Florida.

The data in column three report the FTE enrollments projected for 1970 and those in column five the projected increase between 1964 and 1970. It is anticipated that seven universities will be operational in 1970 and that their undergraduate enrollments will range from 2,602 to 13,535. The projected increases range from 618 at Florida A & M University to 5,354 at the University of South Florida. The total increase in FTE enrollment in the University system between 1964 and 1970 is projected to be 18,284, or 60.6 per cent of the 1964 enrollment.

The data in Table 8 show the distribution on a percentage basis of the projected 1970 State University System

TABLE 8

PERCENTAGE OF TOTAL 1970 FTE STATE UNIVERSITY SYSTEM ENROLLMENT AND OF THE INCREASE (1964-70) PROJECTED FOR EACH UNIVERSITY

Name	Percentage FTE in 1970	Percentage of Increase in FTE (1964-70)
U. of F.	28.0	8.2
U.S.F.	21.6	29.3
F.S.U.	21.2	4.0
Fla. Atl. U.	10.0	23.5
F.A.M.U.	7.2	3.4
U. of W. Fla.	6.6	17.4
Fla. Tech. Univ.	5.4	14.2

undergraduate enrollment among the several universities, and the percentage of the total increase (1964-70) that may be expected to be accommodated in each. This information indicates that the University of Florida, University of South Florida and Florida State University will each enroll between 20 and 30 per cent of the students and that the newer universities and Florida A & M University will each enroll from 5 to 10 per cent of the total.

The three older universities, U of F, FSU, and FAMU, are projected to play minor roles in absorbing the estimated increase in enrollment. As a group, they will accommodate 15.6 per cent of the increase. The Florida Technological University and the University of West Florida, which were not operational in 1964, will probably accommodate 14.2 per cent and 17.4 per cent respectively of the projected increase. Florida Atlantic University and the University of South Florida will enroll 23.5 per cent and 29.3 per cent respectively of the anticipated increase.

Private Collegiate Institutions

Sixteen institutions operating under private or church related auspices submitted reports and otherwise cooperated in this study. Some offer a comprehensive university program, some liberal arts programs, and some highly specialized technical programs. Some offer two-year curricula and others four-year programs leading to the bachelor's degree. Some are among the oldest colleges of the State and others enrolled their first students between 1961 and 1964. Each contributes to the educational resources available to the people of Florida, and makes the types of contributions that it feels it is uniquely qualified to make.

The projections reported in this section were based upon statements submitted by officers of the colleges and universities named. Plans for their future growth may, or may not, be appreciably influenced by the economic and social needs and population pressures of their communities or of the State.

The sixteen institutions included in this study as a group enrolled 16,959 FTE undergraduate students in 1960; 19,056 in 1964; and their projected enrollment in 1970 is 26,283 FTE students. These enrollments represent an increase of 12.4 per cent between 1960 and 1964, and a projected increase of 37.9 per cent between 1964 and 1970.

The data in Table 9 show the FTE enrollments by institutions for 1960 and 1964 in columns one and two. For each the increase or decrease between these two dates is reported in column four. The projected 1970 FTE enrollment of each is presented in column three and the projected increase or decrease between 1964 and 1970 is reported by institution in column five. These data show that in 1960 the largest private university enrolled 8,532 FTE students; four institutions enrolled between one thousand and two thousand students each; and seven enrolled fewer than one thousand each. Four had not been opened to students, or

TABLE 9

FTE UNDERGRADUATE ENROLLMENT IN PRIVATE COLLEGES AND UNIVERSITIES IN FLORIDA 1960, 1964 AND 1970; AND INCREASES IN ENROLLMENT 1960-64 AND 1964-70

	FTE Enrollment			FTE Increase	
Name	1960	1964	1970	1960-64	1964-70
Univ. of Miami	8,532	7,566	8,384	-966	818
Jacksonville U.	1,017	1,690	2,576	673	886
St. Leo	166	511	1,945	345	1,434
Fla. Southern	1,866	1,693	1,787	-173	94
Rollins	848	1,166	1,735	318	569
U. of Tampa	1,514	1,715	1,472	201	-243
Fla. Presby.	152	668	1,393	516	725
Stetson	1,232	1,389	1,288	157	-101
Bethune-Cookman	625	861	1,262	236	401
Brevard Eng.		264	999	264	741
Biscayne		126	867	126	736
Barry	557	622	788	65	166
Marymount		181	578	181	397
Fla. Mem.	274	317	552	43	235
New College		101	473	101	372
Embry-Riddle Aeronautical Institute	176	186	184	10	- 2
Totals	16,959	19,056	26,283	2,097	7,227

reported no enrollment.

By 1964, all sixteen of the private colleges reported enrollments. Six enrolled from 1,166 to 7,566 FTE students and ten reported enrollments ranging from 101 to 861 students. Two institutions experienced a decrease in enrollment, and in the remaining fourteen increases ranged from 10 to 673 students. It is very highly probable that the two institutions reporting losses expanded their graduate programs or otherwise added services to their constituents and these activities were not reportable to this study. Their net increase in FTE enrollment between 1960 and 1964 was 2,097.

For 1970, one institution projected an enrollment in excess of 8,000 and one in excess of 2,500. Seven projected enrollments between 1,000 and 2,000 and seven enrollments of less than one thousand. As a group they projected an increase of 7,227 FTE students. Three projected decreased enrollments between 1964 and 1970. The increases projected by the remaining thirteen ranged from 94 to 1,434.

The distribution of the total projected 1970 private institutional enrollment among the sixteen colleges and universities reporting is presented in column one of Table 10.

TABLE 10

PERCENTAGE OF TOTAL 1970 FTE PRIVATE COLLEGE AND UNIVERSITY ENROLLMENT AND OF THE INCREASE (1964-70) PROJECTED FOR EACH INSTITUTION

Name	Percentage FTE 1970	Percentage of Increase in FTE (1964-70)
U. of Miami	31.9	11.3
Jacksonville Univ.	9.8	12.3
St. Leo	7.4	19.8
Florida Southern	6.8	1.3
Rollins	6.6	7.9
U. of Tampa	5.6	-3.4
Fla. Presbyterian	5.3	10.0
Stetson	4.9	-1.4
Bethune-Cookman	4.8	5.5
Brevard Eng.	3.8	10.2
Biscayne	3.3	10.3
Barry	3.0	2.3
Marymount	2.2	5.5
Fla. Mem.	2.1	3.3
New College	1.8	5.1
Embry-Riddle Aero. Inst.	.7	- .0

The percentage of the total increase that may be expected to be assumed by each institution is presented in column two of the same table. The data show that 31.9 per cent of students in the private colleges and universities of Florida will be enrolled in the University of Miami in 1970. Six institutions will each enroll from 5 to 10 per cent of the total, and the remaining nine will each enroll fewer than 5 per cent of the total.

The data in the second column show that thirteen of the institutions plan to share to some extent the increased enrollment in the private colleges and universities of Florida. Each of six expects to assume between 10 and 20 per cent of the increase. Each of seven is projected to assume less than 10 per cent of the increase. Three do not plan to increase enrollments and it seems that a decrease may be likely in some of them.

Summary and Conclusions

This Chapter has presented projections on the number of full time students who will be enrolled in undergraduate study in the colleges and universities of the State of Florida in 1970-71. Projections have been made in terms of full time equivalent students.

The findings here presented provide a reasonable basis for projecting plans for physical facilities for higher education in Florida through the year 1970-71. Two major sources of information have been explored, the number of high school graduates and the undergraduate enrollments in public and private higher institutions in Florida.

Based upon the computations herein indicated, it is reasonable to assume that the gross undergraduate enrollments in Florida higher institutions by 1970-71 will be 180,702. These enrollments, divided as to general types of higher institutions are:

1.	Community Junior Colleges	105,973
2.	State Universities	48,436
3.	Private Collegiate institutions	26,283

In this Chapter projected enrollments have been indicated for each participating institution. These data should provide responsible boards with the basic dimensions for the development of necessary physical facilities for each collegiate institution in the State of Florida.

CHAPTER III

EXISTING FACILITY AND 1970 SPACE NEEDS FOR FLORIDA'S JUNIOR COLLEGES

Introduction

This chapter presents a comprehensive picture of junior college facilities in Florida as of October, 1965 and of their facility needs projected to 1970. Represented in the study are all operating and newly established two-year colleges of the state except two private institutions which, as of October, 1965 represented less than five per cent of the state's total junior college enrollment.

The materials in this chapter are presented in three major sections: (1) an inventory of the existing physical plants; (2) an analysis of the utilization of existing facilities; and (3) projections of facility and space needs by 1970.

For purposes of this study, junior colleges have been divided into three groups. The first group consists of seventeen operating units with facilities located on twenty permanent sites. (One of these units has three separate campuses located on permanent sites.) The second group consists of those eight institutions operating on temporary sites as of October, 1965. Three of these institutions are scheduled to move to permanent campuses, whereas the other five are junior colleges for Negro students which are scheduled to be closed. The third group is composed of six newly established institutions, five of which will begin operation in the fall of 1966 and one in the fall of 1967.

Only the first group of institutions is included in the inventory of existing physical plants and in the utilization analysis. Since institutions in the second category will all abandon their present facilities before 1970, they have been excluded from the inventory and utilization sections of this report. The five junior colleges indicated as the second group are moving to new sites and are included in the third section of the report which deals with projections of facilities and space needed by 1970. Included in this section also are the newly established institutions which are scheduled to begin operation in the fall of 1966.

The campuses for Negro students which are being discontinued are not included in the projections of facility needs. The students enrolled in these institutions as of October, 1965 have been included with enrollments of junior colleges which will absorb them. Consequently, these additional enrollments are reflected in the projected needs of the receiving institutions.

In this report an operating unit with more than one campus is considered as a single institution for projecting facility and space needs. This is done on the assumption that an institution with multiple campuses makes overall plans for facility needs and that within limits, adjustments can be made in assigning students to different campuses so as to obtain maximum utilization of existing facilities.

The data on which the inventories, analyses, and projections shown in this report are based were obtained directly from the junior colleges. Appendix A contains copies of the data forms which were sent to each institution along with the accompanying instructions. Data on enrollments in individual class sections provided the basis for estimating the additional space requirements for housing projected enrollments.

Inventory of Existing Physical Plants

The inventory of existing physical plant space is limited to the seventeen junior colleges that were located on permanent sites as of October, 1965. The other institutions are omitted from these analyses because their present sites and facilities are occupied on a temporary basis and will be abandoned.

This inventory contains the following information concerning the physical facilities of each of the seventeen institutions: (1) an analysis of gross and assignable space; (2) an analysis of the classification of construction; (3) an analysis of the age of existing facilities; (4) an analysis of the future disposition of existing facilities, (5) distribution of assignable space on a per student basis; (6) an analysis of general classroom space; (7) an analysis of teaching laboratory space; (8) an analysis of general classrooms on a student-station basis; and (9) an analysis of teaching laboratories on a student-station basis.

Analysis of Gross and Assignable Space

Table 11 shows the gross physical space of each institution and the amount of this space that is assignable for various purposes. A comparison of the two columns entitled "Total Assignable Space" and "Non-Assignable Space" shows that when all institutions are considered together, approximately two-thirds (65.7) of the gross space is assignable and one-third (34.3) is non-assignable. Furthermore, with the exception of one institution, the amount of net assignable space for most of the institutions ranges between 60 and 75 per cent of the total space.

When the assignable space is analyzed according to the type of facilities, there is pronounced variation among the junior colleges. Whereas, space assigned for general classrooms averages 17.2 per cent of the gross, it is less than 10 per cent for two of the institutions (4.8 per cent and 6.9 per cent) and it exceeds 25 per cent (27.2) in one case. Most institutions, however, fall within the range of 13 per cent to 22 per cent.

Nearly as much space is used for teaching laboratories (including shops) as is used for general classrooms. The percentage of space used for teaching laboratories is 14.0 compared to 17.2 for general classrooms. In eight institutions, more space is available for teaching laboratories than is used for

TABLE 11

REPORTED GROSS SPACE, NON-ASSIGNABLE AND NET ASSIGNABLE PHYSICAL PLANT S

Inst. Code	TYPE OF FACILITY								
	General Classrooms		Teaching Laboratories		Library		All Other Assignable Space [2]		Total Assignabl
	Sq. ft.	%	Sq.ft.	%	Sq.ft.	%	Sq.ft.	%	Sq.ft.
27	2,408	4.8	3,568	7.1	2,926	5.9	4,788	9.6	13,690
30	8,928	12.1	9,617	13.1	8,650	11.7	26,223	35.6	53,418
32	52,558	27.2	38,092	19.7	10,424	5.4	42,965	22.3	144,039
33	39,444	21.9	30,030	16.7	13,174	7.3	52,755	29.3	135,403
34	7,561	13.5	9,583	17.2	8,716	15.6	17,085	30.6	42,945
35	101,593	16.0	85,882	13.6	83,995	13.3	130,607	20.6	402,077
36	53,571	21.7	33,217	13.4	19,857	8.0	73,562	29.8	180,207
37	11,860	11.7	16,400	16.2	9,717	9.6	28,573	28.2	66,550
39	14,016	20.9	15,751	23.5	5,476	8.2	8,626	12.8	43,869
40	9,395	13.2	5,454	7.7	6,834	9.6	16,636	23.4	38,319
41	4,907	6.9	12,481	17.5	8,693	12.2	21,282	29.9	47,363
43	30,927	20.7	17,449	11.7	12,100	8.1	31,250	20.8	91,726
44	14,447	12.4	20,249	17.3	4,843	4.1	38,448	32.9	77,987
48	56,390	23.0	35,664	14.6	31,457	12.6	46,427	19.2	169,938
49	27,898	13.3	14,873	7.1	22,242	10.6	52,614	25.3	117,627
51	19,883	19.9	10,156	10.2	12,210	12.2	31,942	32.0	74,191
52	10,702	15.1	10,110	14.3	8,077	11.4	11,154	15.8	40,043
53	20,595	15.1	26,901	19.7	15,016	11.0	31,953	23.5	94,465
62	45,044	14.4	38,103	12.2	24,388	7.8	81,494	26.1	189,029
63	9,860	15.0	6,153	9.4	5,105	7.8	24,472	37.3	45,590
Total	541,987	17.2	439,733	14.0	313,900	10.0	772,820	24.5	2068,476

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[1] Limited to institutions and facilities which were located on permanent site
under construction as of that date are included.

[2] Includes all space not included in preceding categories which can be assign

[3] Space for janitorial and building maintenance services or for non-assigned
service areas).

[4] In addition to 3 above, this cell includes such space as chapel, auditoriu
dining rooms, etc.

TABLE 11

NABLE AND NET ASSIGNABLE PHYSICAL PLANT SPACE BY TYPE OF FACILITY[1]

TYPE OF FACILITY								
ibrary		All Other Assignable Space [2]		Total Assignable		Non-Assignable Space [3]		Gross
q.ft.	%	Sq.ft.	%	Sq.ft.	%	Sq.ft.	%	Sq.ft
2,926	5.9	4,788	9.6	13,690	27.4	36,310 (4)	72.6	50,000
8,650	11.7	26,223	35.6	53,418	72.5	20,254	27.5	73,672
0,424	5.4	42,965	22.3	144,039	74.6	49,127	25.4	193,166
3,174	7.3	52,755	29.3	135,403	75.2	44,552	24.8	179,955
8,716	15.6	17,085	30.6	42,945	76.9	12,879	23.1	55,824
3,995	13.3	130,607	20.6	402,077	63.5	231,270	36.5	633,347
9,857	8.0	73,562	29.8	180,207	72.9	66,980	27.1	247,187
9,717	9.6	28,573	28.2	66,550	65.7	34,712	34.3	101,262
5,476	8.2	8,626	12.8	43,869	65.4	23,202	34.6	67,071
6,834	9.6	16,636	23.4	38,319	53.9	32,783	46.1	71,102
8,693	12.2	21,282	29.9	47,363	66.5	23,906	33.5	71,269
2,100	8.1	31,250	20.8	91,726	61.3	57,893	38.7	149,619
4,843	4.1	38,448	32.9	77,987	66.7	38,856	33.3	116,843
1,457	12.6	46,427	19.2	169,938	69.4	74,768	30.6	244,706
2,242	10.6	52,614	25.3	117,627	56.3	91,404	43.7	209,031
2,210	12.2	31,942	32.0	74,191	74.3	25,722	25.7	99,913
8,077	11.4	11,154	15.8	40,043	56.6	30,677	43.4	70,720
5,016	11.0	31,953	23.5	94,465	69.3	41,921	30.7	136,386
4,388	7.8	81,494	26.1	189,029	60.5	123,267	39.5	312,296
5,105	7.8	24,472	37.3	45,590	69.5	20,029	30.5	65,619
3,900	10.0	772,820	24.5	2068,476	65.7	1080,512	34.3	3148,988

ties which were located on permanent sites as of October, 1965. New facilities uded.

preceding categories which can be assigned for education related activities.

naintenance services or for non-assigned use (e.g., public washrooms and general

includes such space as chapel, auditorium not used for instruction, private general classrooms. The range of percentages of space for laboratories among the institutions is less than that for general classrooms. The amount exceeded 20 per cent in only one institution and it was under 10 per cent in four, the lowest being 7 per cent. Where general classroom and teaching laboratories are combined, the average amount of space used is 31.2 per cent. The space used in most of the institutions is reasonably close to the average. Stated another way, slightly less than one-third of the assignable space in Florida junior colleges is assigned for direct instructional purposes.

When all institutions are considered together, 10.0 per cent of their space is assigned for the library. However, the range of percentages varies considerably, from a low of 4.1 per cent in one institution to a high of 15.6 per cent in another. In most of the institutions the range is between 8 and 12 per cent.

The category in Table 11 designated as "All Other Assignable Space" represents all other instruction-related facilities, such as offices of all types, practice rooms, indoor physical education facilities, teaching auditoriums, work rooms, and the like. This category accounts for nearly one-fourth (24.5) of the total gross space used for this purpose in all the institutions taken together. The range among the institutions was from 9.6 per cent to 37.3 per cent. In general, as would be expected, this percentage is highest for the smaller and lowest for the larger institutions.

Non-assignable space is defined as all areas not assignable for education-related activities. This category includes cafeterias, book stores, lounges, lavatories, janitorial and building maintenance service areas, heating plant, interior hallways, walls, and the like. Such space consumes slightly more than one-third of the gross space of all the junior colleges taken together. The range of percentage of gross space used for these purposes, (with the exception of one institution) is from 23.1 per cent to 46.1 per cent. There is no apparent relationship between the size of an institution and the proportion of its space utilized for non-instructional purposes.

In terms of overall square footage, it can be seen from Table 11 that the range among the junior colleges is very large. The institution with the greatest amount of gross space has more than ten times as much as do the two with the least amount of space. Nine of these junior colleges have less than 100,000 square feet of total gross space each whereas, two have in excess of 300,000 square feet, the largest having 633,347 square feet.

Type of Construction

An analysis of physical plant facilities located on permanent sites and classified by types of construction is presented in Table 12. Virtually all (95.1 per cent) of the facilities located on these campuses can be classified as "permanent" construction. In thirteen of the junior colleges this classification represents 100 per cent of their facilities. In only five institutions are there facilities that are classified as "temporary" in terms of the type of construction. Also in five institutions there are facilities that are classified as "makeshift." Makeshift space refers to a space that is not designed for instruction but is used temporarily for instructional purposes.

In only one junior college, Number 35, does the percentage of temporary and makeshift space combined exceed 10 per cent of the institution's total space. This indicates that little construction will be required in years ahead to replace temporary or makeshift physical facilities for Florida's junior colleges now operating on permanent sites.

Age of Existing Facilities

The recency of the junior college development in Florida is reflected by the data presented in Table 13. Seventy-five per cent of all facilities located on permanent campus sites have been constructed since 1959. Virtually all of the remaining facilities (24.2 per cent) were constructed during the

TABLE 12

OUSTIDE GROSS SQUARE FEET OF PHYSICAL PLANT SPACE CLASSIFIED AS PERMANENT, TEMPORARY AND MAKESHIFT CONSTRUCTION[1]
FLORIDA JUNIOR COLLEGES

	TYPE OF CONSTRUCTION							
	Permanent		Temporary		Makeshift		Total	
Inst. Code	Sq.ft.	%	Sq.ft.	%	Sq.ft.	%	Sq.ft.	%
27	50,000	100.0					50,000	100.0
30	73,672	100.0					73,672	100.0
32	179,090	91.9			14,076	8.1	193,166	100.0
33	178,715	99.3			1,240	.7	179,955	100.0
34	55,824	100.0					55,824	100.0
35	526,347	83.1	97,250	15.4	9,750	1.5	633,347	100.0
36	247,187	100.0					247,187	100.0
37	101,262	100.0					101,262	100.0
39	62,609	93.3	3,238	4.8	1,224	1.8	67,071	100.0
40	71,102	100.0					71,102	100.0
41	64,672	90.7	6,597	9.3			71,269	100.0
43	149,619	100.0					149,619	100.0
44	110,543	94.6	1,500	1.3	4,800	4.1	116,843	100.0
48	244,706	100.0					244,706	100.0
49	209,031	100.0					209,031	100.0
51	99,913	100.0					99,913	100.0
52	70,720	100.0					70,720	100.0
53	123,162	90.3	13,224	9.7			136,386	100.0
62	312,296	100.0					312,296	100.0
63	65,619	100.0					65,619	100.0
Total	2996,089	95.1	121,809	3.9	31,090	1.0	3148,988	100.0

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[1] Limited to institutions and facilities which were located on permanent sites as of October, 1965. New facilities under construction as of that date are included.

TABLE 13

OUTSIDE GROSS SQUARE FEET OF PHYSICAL PLANT CLASSIFIED AS TO PERIOD WHEN CONSTRUCTED[1] FLORIDA JUNIOR COLLEGES

	PERIOD WHEN CONSTRUCTED					
Inst.	Before 1940		1940-1959		1960 and later	
Code	Sq.ft.	%	Sq.ft.	%	Sq. ft.	%
27					50,000	100.0
30					73,672	100.0
32	14,600	7.6			178,566	92.4
33					179,955	100.0
34					55,824	100.0
35			107,000	16.9	526,347	83.1
36			141,888	57.4	105,299	42.6
37			76,786	75.8	24,476	24.2
39	4,462	6.7			62,609	93.3
40					71,102	100.0
41	2,404	3.4	27,376	38.4	41,489	58.2
43			55,291	33.3	94,328	66.7
44	4,000	3.4			112,843	96.6
48			98,103	40.1	146,603	59.9
49					209,031	100.0
51			18,483	18.5	81,430	81.5
52					70,720	100.0
53			28,356	20.8	108,030	79.2
62			173,686	55.6	138,610	44.4
63			344,477	52.5	31,142	47.5
Total	25,466	.8	761,446	24.2	2362,076	75.0

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[1] Limited to institutions and facilities which were located on permanent sites as of October, 1965. New facilities under construction as of that date are included.

period 1940-1959, thus leaving less than 1 per cent that was constructed prior to 1940.

This analysis indicates that little construction will be needed before 1970 to replace obsolete structures located on permanent junior college sites.

Anticipated Future Disposition of Existing Facilities

The data presented in Table 14 lend support to the interpretation of Table 13; namely, that little construction will be required before 1970 to replace outmoded existing junior college facilities.[1] More than 90 per cent of the present facilities (90.7 per cent) will continue to be used for the same purposes as they are presently used. (See Table 11 for description of the various types of facilities.)

The data presented in Table 14 indicated that only 7.5 per cent of the existing junior college facilities will be abandoned. Another 0.3 per cent will be rehabilitated while 1.5 per cent will be converted to some other institutional use. In the case of only three institutions, Numbers 32, 33, and 35, is there a significant amount of space being abandoned, and in the case of but one institution, Number 39 is an appreciable amount to be converted to other institutional use.

Analysis of the Utilization of Existing Facilities

Table 15 provides an analysis of assignable space for various types of junior college facilities expressed in terms of square feet per full-time-equivalent student. The total assignable space in these junior colleges averages approximately 50 square feet (49.6) per full-time-equivalent student. However, the range of percentages for such use is considerable. One institution, Number 63, with 130 square feet, is far out of line in this respect. Excluding that institution, the range is from 36.3 square feet to 78.4 square feet per FTE student.

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[1] The figures for Institution 40, Table 14 have been corrected as has the total where this item is a factor. This correction was made on the assumption that an error was made in the report from that school.

TABLE 14

ANTICIPATED FUTURE DISPOSITION OF EXISTING FACILITIES[1] FLORIDA JUNIOR COLLEGES

	FUTURE DISPOSITION							
Inst. Code	No Change Sq.ft.	%	Abandon Sq.ft.	%	Rehabilitate Sq.ft.	%	Convert to other Use Sq.ft.	%
27	50,000	100.0						
30	73,672	100.0						
32	153,890	79.7	39,276	20.3				
33	110,563	61.4	68,927	38.4			465	.3
34	55,824	100.0						
35	526,347	83.1	107,000	16.9				
36	247,187	100.0						
37	101,262	100.0						
39	30,361	45.3	3,238	4.8	9,254	13.8	24,218	36.1
40	71,102	100.0						
41	64,672	90.7					6,597	9.3
43	149,619	100.0						
44	107,543	92.0	4,800	4.1			4,500	3.9
48	243,536	99.5					1,170	.5
49	209,031	100.0						
51	89,589	89.7					10,324	10.3
52	70,720	100.0						
53	123,162	90.3	13,224	9.7				
62	312,296	100.0						
63	65,619	100.0						
Total	2855,995	90.7	236,465	7.5	9,254	.3	47,274	1.5

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[1] Limited to institutions and facilities which were located on permanent sites as of October, 1965. New facilities under construction as of that date are included.

TABLE 15

DISTRIBUTION OF ASSIGNABLE SPACE ON A PER STUDENT BASIS[1]
(Expressed in Square Feet per Full-Time Equivalent Student)
FLORIDA JUNIOR COLLEGES

Inst. Code	1965 FTE Enrollment	Total Assignable Space	SQ. FT. OF ASSIGNABLE SPACE PER STUDENT				
			Total	General Classroom	Teaching Laboratories	Library	All Other[2]
27	338	13,690	40.5	7.1	10.6	8.7	14.1
30	1,020	53,418	52.4	8.8	9.4	8.5	25.7
32	2,232	144,039	64.5	23.5	17.1	4.7	19.2
33	3,212	135,403	42.2	12.3	9.3	4.1	16.5
34	737	42,945	58.3	10.3	13.0	11.8	23.2
35	11,081	402,077	36.3	9.2	7.8	7.6	11.7
36	2,793	180,207	64.5	19.2	11.9	7.1	26.3
37	1,188	66,550	56.0	10.0	13.8	8.2	24.0
39	685	43,869	64.0	20.5	23.0	8.0	12.5
40	791	38,319	48.4	11.9	6.9	8.6	21.0
41	806	47,363	58.8	6.1	15.5	10.8	26.4
43	1,735	91,726	52.9	17.8	10.1	7.0	18.0
44	1,181	77,987	66.0	12.2	17.1	4.1	32.6
48	3,217	169,938	52.8	17.5	11.1	9.8	14.4
49	1,500	117,627	78.4	18.6	9.9	14.8	35.1
51	1,991	74,191	37.3	10.0	5.1	6.1	16.1
52	802	40,043	49.9	13.3	12.6	10.1	13.9
53	1,485	94,465	63.6	13.9	18.1	10.1	21.5
62	4,600	189,029	41.1	9.8	8.3	5.3	17.7
63	349	45,590	130.6	28.3	17.6	14.6	70.1
Total	41,743	2,068,476	49.6	13.0	10.5	7.5	18.5

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[1] Limited to institutions and facilities which were located on permanent sites as of October, 1965. New facilities under construction as of that date are included.

[2] Includes all space not included in preceding categories which can be assigned for education related activities.

A number of factors singly or in combination with others, determine an institution's assignable space for each full-time-equivalent student. One factor is the extent of the utilization of student stations; i.e., how nearly facilities are filled to their seating capacity. Another factor is the number of hours per week that classes are scheduled. A third factor is the amount of space allocated for student stations; i.e., how many seats are made available in a facility of a given size.

Institutions with large enrollments can more easily attain a high percentage of utilization than can institutions with smaller enrollments. No doubt this explains, in part at least, why Institutions Numbers 33, 35, 51, and 62 which had the lowest number of square feet per F.T.E. were among those with the largest enrollments. However, Institutions Numbered 32, 36, 49, and 53, all of which have substantial enrollments, were among those with the highest amount of square feet per F.T.E. student. These data suggest that these institutions could handle larger enrollments in their existing assignable space.

The remaining columns of Table 15 show how each institution stands in relation to the other Florida junior colleges in respect to the amount of space available per F.T.E. student for various types of use. The data contained in this table indicate which type or types of space probably should be given priority by individual junior colleges when planning subsequent construction. Table 15 also provides data for establishing state-wide priorities among institutions for subsequent construction. For example, Institutions 32, 39, and 63 should be able to handle a considerably larger F.T.E. enrollment than they had as of October, 1965. By contrast, Institutions Numbered 34, 35, 37, 41, 51, and 62 may need to give priority to general classroom space in subsequent construction. Similarly, Institutions Numbered 32, 29, 44, 53, and 63 seem to have adequate teaching laboratory space for their present enrollments. However, Institutions Numbered 35, 40, and 51 appear to be approaching capacity enrollment for their existing teaching laboratories. The reader is cautioned to observe that these comparisons provide only rough guides. Obviously, the nature of the instructional programs that an institution now offers and anticipates offering later on are the key factors in determining priority of space needs.

Library space lends itself to direct comparison among institutions better than does space used for general classrooms and teaching laboratories. This is accounted for by the fact that library space requirements do not vary with respect to the types of programs offered as much as they do for classrooms and laboratories. If this assumption is correct, certain Florida junior colleges, e.g., Numbers 32, 33, and 44 have immediate need of more library space. By contrast, Institutions Numbers 34, 41, 49, 52, 53, and 63 should be able to accommodate larger student enrollments with existing library space.

The data in the last column of Table 15 designated as "other assignable space," shows wide variation among institutions. As would be expected, the square footage per F.T.E. student is generally lower for institutions with large enrollments. Institution Number 63 is far out of line when compared with the other junior colleges. This must be due to the fact that it has space greatly in excess of that required for the students enrolled. A large per student square footage indicated in this column would result from a high ratio of space used for indoor physical education facilities, auditoriums, practice rooms and the like to the F.T.E. enrollment.

Analysis of General Classroom Space

Data in Table 16 show that the twenty junior colleges operating on their permanent sites reported a total of 574 general classrooms of which but 56 were located in temporary buildings. Only in Institutions 35 and 61 did these temporary classrooms constitute a significant proportion of the college's total classroom space. In the first case, 25 of 91 classrooms were so classified, and in the second case, 11 of 32. The data here presented indicate that no appreciable amount of construction will be required in the years immediately ahead to replace

TABLE 16

AN ANALYSIS OF GENERAL CLASSROOM SPACE[1]
FLORIDA JUNIOR COLLEGES

Inst. Code	No. of General Classrooms Total	Perm.	Temp.[2]	Sq.ft. of Space	Avg. Rm. Size (Sq.ft.)	No. of Student Stations	Sq.ft. per Student Station	Optimum No. of Student Stations[3]
27	7	7		6048	864.0	290	20.9	403.2
30	11	11		9024	820.4	452	20.0	601.6
32	77	68	9	55,006	714.4	2219	24.8	3667.1
33	52	49	3	36,427	700.5	2059	17.7	2428.5
34	12	12		7,807	650.6	432	18.1	520.5
35	91	67	24	65,314	717.7	4021	16.2	4354.3
36	38	38		30,615	805.7	1542	19.9	2041.0
37	17	17		10,878	639.9	571	19.1	725.2
39	15	13	2	11,795	786.3	536	22.0	786.3
40	11	11		7490	680.9	350	21.4	499.3
41	7	5	2	3929	561.3	260	15.1	261.9
43	14	14		9579	684.2	572	16.7	638.6
44	11	9	2	7388	671.6	410	18.0	492.5
48	38	38		30,400	800.0	1570	19.4	2026.7
49	26	26		18,061	694.7	834	21.7	1204.1
51	32	21	11	19,628	613.4	977	20.1	1308.5
52	16	16		10,632	664.5	770	13.8	708.8
53	17	14	3	14,734	866.7	619	23.8	982.3
62	67	67		45,257	675.5	2086	21.7	3017.1
63	15	15		9860	657.3	370	26.6	657.3
Total	574	518	56	409,872	714.1	20,940	19.6	27,325

---

[1] Limited to institutions and facilities which were located on permanent sites as of October, 1965. New facilities under construction as of that date are included.

[2] This includes classrooms classified as "makeshift."

[3] Based on 15 sq. ft. per student station, a figure frequently used for projecting general classroom space needs for junior colleges.

temporary classrooms on these 20 campuses, except in the case of the two that have been mentioned.

A total of 409,872 square feet of floor space is provided in the 574 general classrooms. The average (mean) size of these classrooms is 714.1 square feet, the range being from 561.3 square feet to 866.7 square feet. There is no apparent relationship between the number of general classrooms in a given institution and the average size of these rooms. This suggests that factors other than institutional enrollment tend to determine classroom size.

The analysis of general classroom space in terms of student stations shows that a total of 20,940 stations were reported. "Student Stations" means the number of student chairs, desks, or work stations that are provided. Stated another way, the data represent the number of students who could be seated with the chairs, desks, and work stations in the classrooms at the time the inventory was made. The amount of space provided for each student station ranged from 13.8 square feet to 26.6 square feet. This means that in the first of these two institutions, an average of nearly twice as many students were seated in a given amount of space as were seated in the same amount of space by the second institution. Here again, the data do not indicate any positive relationship between the size of an institution and the amount of general classroom space provided for each student station. In fact, the institutions (Numbers 15 and 16) which represent the two extremes in the number of square feet per student station, were both small, each having approximately the same number of general classrooms. Ranges for the largest junior colleges were almost as great.

A measure frequently used for estimating junior college general classroom space needs is 15 square feet per student station. Viewed in one respect, the application of this measure reflects favorably on the Florida junior colleges in that only one institution fell below this recommended minimum. Considered from another perspective, the junior colleges of Florida could provide 30 per cent more general classroom student stations if they allocated an average of 15 square feet per student station. It is important to remember, however, that this figure of 15 square feet represents a hypothetical norm that has not been validated even though widely accepted. In general, Florida may well consider its situation in this respect to be favorable.

Analysis of Teaching Laboratory Space

The data presented in Table 17 provide the same information relative to teaching laboratories as that provided in Table 16 for general classrooms. A total of 303 teaching laboratories existed or were under construction in Florida junior colleges as of October, 1965. All but thirty of these laboratories were located in permanent buildings. In only one institution was a substantial number of teaching laboratories classified as temporary facilities (20 of 44).

The 303 teaching laboratories that were in use provide 313,515 square feet of space, an average size of 1034.7 square feet per laboratory. They range in size from 641.8 square feet to 1294.6 square feet. As is the case with general classrooms, there is no positive relationship between the average size of laboratories and the number of them which an institution possesses. This may be due in part to the variety of types of laboratories that exist.

Student stations (i.e. separate work spaces) totaling 8475 were available in these 303 teaching laboratories. The space provided for each student station ranged from an average of 19.3 square feet in one institution to 51.6 square feet in another. This variation can be accounted for in part, at least, by the fact that teaching laboratories in junior colleges serve a variety of purposes that call for differing amounts of space per student station.

The measure frequently used for estimating junior college teaching laboratory space is 40 square feet per student station. Based on this criterion, more than half of the Florida junior colleges are providing too little space per student station. However, in reality this may not be the case. The figure of 40 square feet per student station is based on the customary requirements for traditional science laboratories. Increasingly, the junior colleges of Florida are offering occupational programs which require laboratory experiences. In many cases, the space needed per student in such laboratories is equal to or greater than that required in the typical science teaching laboratory.

TABLE 17

AN ANALYSIS OF TEACHING LABORATORY SPACE[1]
FLORIDA JUNIOR COLLEGES

Inst. Code	No. of Teaching Laboratories		[2]	Sq. ft. of Space	Avg. Lab Size (sq.ft.)	No. of Student Stations	Sq.ft. per Student Station	Optimum No. of Student Stations[3]
	Total	Perm.	Temp.					
27	2	1	1	2408	1204.0	48	50.2	60.2
30	9	9		8657	961.9	256	33.8	216.4
32	16	16		17,863	1116.4	475	37.6	446.6
33	18	17	1	15,433	857.4	441	35.0	385.8
34	7	7		7124	1017.7	307	23.2	178.1
35	44	24	20	53,280	1210.9	1244	42.8	1332.0
36	26	26		30,992	1192.0	696	44.5	774.8
37	8	8		8540	1067.5	385	22.2	213.5
39	12	11	1	15,535	1294.6	301	51.6	388.4
40	7	7		6245	892.1	324	19.3	156.1
41	10	7	3	9552	955.2	263	36.3	238.8
43	23	23		22,373	972.7	739	30.3	559.3
44	12	9	3	7702	641.8	282	27.3	192.6
48	25	25		24,488	979.5	676	36.2	612.2
49	15	15		14,810	987.3	381	38.9	370.3
51	8	7	1	5557	694.6	195	28.5	138.9
52	8	8		7542	942.8	229	32.9	188.6
53	12	12		12,624	1052.0	249	50.7	315.6
62	35	35		36,637	1046.8	836	43.8	915.9
63	6	6		6153	1025.5	148	41.6	153.8
Total	303	273	30	313,515	1034.7	8475	37.0	7838

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[1] Limited to institutions and facilities which were located on permanent sites as of October, 1965. New facilities under construction as of that date are included.

[2] This includes laboratories classified as "makeshift."

[3] Based on 40 square feet per student station, a figure frequently used for projecting teaching laboratory space for junior colleges.

Distribution of General Classrooms by Student Station Capacity

The data presented in Table 18 show that the junior colleges of Florida have few very small and few very large general classrooms. Of the total of such rooms 574, or 88.7 per cent, have student station capacities ranging from 20 to 60. In fact, in the case of 9 of the 20 institutions, three-fourths of all general classrooms have a student station capacity ranging from 20 to 39. Only four of the institutions have more classrooms with a student station capacity of 40-59 than they have with capacity of 20-39.

This analysis suggests that junior college classrooms in Florida are built of a size that assures that classes will not become so large that the individual student's identity is lost. Whether and to what extent it would be desirable to have greater variety of classroom size falls outside the scope of this study.

Distribution of Teaching Laboratories by Student Station Capacity

A comparison of the data included in Tables 18 and 19 indicate that there is more variation in student station capacity for laboratories than for general classrooms. Even so, nearly half of all these teaching laboratories have student station capacities of 20-29. While 16.5 per cent have capacities of under 20, a somewhat larger percentage in this category might have been expected. The number of laboratories with capacities of 40 or more was only 6.7 per cent. One might very reasonably have anticipated even fewer laboratories with large student station capacity.

Utilization of Facilities

Classroom Student Station Utilization on a Per Week Basis

In order to facilitate interpretation of the materials that are presented in Table 20, the following explanation is given. The figures shown in the column entitled "Possible Student Hours" were obtained by multiplying the number of student stations which each institution reported in its general classrooms by the assumed available periods per week. The assumed number of available periods

TABLE 18

DISTRIBUTION OF GENERAL CLASSROOMS BY STUDENT STATION CAPACITY[1]
FLORIDA JUNIOR COLLEGES

	STUDENT CAPACITY									
Inst.	Under 20		20-39		40-59		60-99		100 & Over	
Code	N.	%	N.	%	N.	%	No.	%	N	%
27			6	85.7					1	14.3
30			6	54.5	3	27.3	2	18.2		
32	16	20.8	59	76.6	2	2.6				
33	1	1.9	21	40.4	25	48.1	5	9.6		
34	1	8.3	9	75.0	1	8.3	1	8.3		
35	1	1.1	20	22.0	59	64.8	8	8.8	3	3.3
36			23	60.6	12	31.6	2	5.2	1	2.6
37			17	100.0						
39	1	6.7	11	73.3	2	13.3	1	6.7		
40	1	9.1	7	63.6	2	18.2	1	9.1		
41			3	42.9	4	57.1				
43			11	78.6	2	14.2			1	7.1
44			8	72.7	3	27.3				
48	4	10.5	12	31.5	20	52.6	1	2.6	1	2.6
49			26	100.0						
51	7	21.9	17	53.1	8	25.0				
52			2	12.6	12	75.0	1	6.3	1	6.3
53			13	76.5	2	11.8	2	11.8		
62	1	1.5	66	98.5						
63			15	100.0						
Total	33	5.7	352	61.3	157	27.4	24	4.2	8	1.4

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[1] Limited to institutions and facilities which were located on permanent sites as of October, 1965. New facilities under construction as of that date are included. Temporary campuses have been excluded.

TABLE 19

DISTRIBUTION OF TEACHING LABORATORIES BY STUDENT STATION CAPACITY[1] FLORIDA JUNIOR COLLEGES

STUDENT CAPACITY[2]

Inst. Code	Under 20 N	Under 20 %	20-29 N.	20-29 %	30-39 N	30-39 %	40-79 N	40-79 %	100 and Over N	100 and Over %
27			2	100.0						
30			5	55.6	3	33.3	1	11.1		
32	1	6.3	2	12.5	11	68.8	2	12.5		
33	5	27.8	7	38.9	6	33.3				
34	1	14.3	4	57.1	1	14.3			1	14.3
35	6	13.6	22	50.0	13	29.5	2	4.6	1	2.3
36	7	26.9	12	46.2	6	23.1			1	3.8
37	1	12.5	4	50.0	2	25.0			1	12.5
39	2	16.7	7	58.3	2	16.7	1	8.3		
40			5	71.4	1	14.3			1	14.3
41			6	60.0	4	40.0				
43			12	52.2	6	26.1	5	21.6		
44	3	25.0	6	50.0	3	25.0				
48	5	20.0	10	40.0	9	36.0	1	4.0		
49	3	20.0	7	46.7	5	33.3				
51	1	12.5	6	75.0	1	12.5				
52			3	37.5	4	50.0	1	12.5		
53	3	25.0	8	66.7	1	8.3				
62	11	31.4	16	45.7	6	17.1	2	5.8		
63	1	16.7	2	33.3	3	50.0				
Total	50	16.5	146	48.2	87	28.7	15	5.0	5	1.7

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[1] Limited to institutions and facilities which were located on permanent sites as of October, 1965. New facilities under construction as of that date are included.

[2] No teaching laboratories existed with student capacities of 80-99.

TABLE 20

AN ANALYSIS OF CLASSROOM STUDENT STATION UTILIZATION ON A PER WEEK BASIS [1]

Inst. Code	No. of Rooms	No. of Student Stations	Possible Student Hours[2]	Actual Student Hours	Percentage of Student Station Utilization
27	7	290	13,050	4287	32.9
30	11	452	20,340	10,857	53.4
32	77	2219	99,855	27,495	27.5
33	52	2059	92,655	45,053	48.6
34	12	432	19,440	5670	29.2
35	91	4021	180,945	111,456	61.6
36	38	1542	69,390	31,444	45.3
37	17	570	25,650	13,799	53.8
39	15	536	24,120	7,442	30.9
40	11	350	15,750	5,962	37.9
41	7	260	11,700	5,864	50.1
43	14	572	25,740	11,744	45.6
44	11	410	18,450	11,296	61.2
48	38	1570	70,650	38,489	54.5
49	26	834	37,530	16,241	43.3
51	32	977	43,965	22,596	51.4
52	16	770	34,650	10,817	31.2
53	17	619	27,855	13,661	49.0
62	67	2086	93,870	43,910	46.8
63	15	370	16,650	5,219	31.3
Total	574	20,939	942,255	443,302	47.0

---

[1] Limited to institutions and facilities which were located on permanent sites as of October, 1965. New facilities under construction as of that date are included.

[2] Based on 45 total hours available for scheduling during a week.

per week was 45. This represents the number of hours per week that a junior college could, within reason, schedule its general classrooms. The product obtained by this calculation represents the possible number of student hours an institution could produce if every seat of every room were filled for 45 hours a week.

About the only way, if at all, that such a condition might be obtained would be by computer scheduling. Even then, utilization would be all but impossible to attain in an institution with limited enrollment. For example, if every room were scheduled 45 hours per week, but on the average, only half of the seats (student stations) were filled, student station utilization would be but 50 per cent.

The "Actual Student Hours" column of Table 20 shows the total number of hours per week that each institution's student stations in general classrooms were in use. The last column entitled "Per Cent of Student Station Utilization" shows the percentage relationship between the "Actual Student Hours" and the "Possible Student Hours." Considering the basis on which the utilization is computed, 60 per cent represents excellent utilization, and 50 per cent very satisfactory utilization. Seven institutions exceeded the 50 per cent level, and the total for all of the institutions approximated this level. On the other hand, six of the institutions failed to attain a utilization ratio of 33 per cent. Two junior colleges had utilization ratios in excess of 60 per cent, nearly twice as high as the ratio for five with the lowest ratios. As might be expected, the larger junior colleges had the highest percentages of utilization. However, there was one notable exception. The institution with the lowest utilization was next to the largest in respect to the number of general classrooms. Conversely, two of the institutions with high utilization ratios were small in size.

Utilization of Student Stations in Teaching Laboratories on a Per Week Basis

The data relating to the utilization of student stations in teaching laboratories shown in Table 21 were derived in the same manner as were those for general classrooms.

Teaching laboratories (and shops), by definition, are specialized facilities. Consequently, one would not expect as large a percentage

TABLE 21

AN ANALYSIS OF STUDENT STATION UTILIZATION IN LABORATORIES ON A PER WEEK BASIS[1]

Inst. Code	No. of Rooms	No. of Student Stations	Possible Student Hours[2]	Actual Student Hours	Percentage of Student Station Utilization
27	2	48	2160	370	17.1
30	9	256	11,520	4,068	35.3
32	16	475	21,375	8,364	39.1
33	18	441	19,845	7,587	38.2
34	7	307	13,815	3,627	26.3
35	44	1244	55,980	25,502	45.6
36	26	696	31,320	10,526	33.6
37	8	385	17,325	4,083	23.6
39	12	301	13,545	3,161	23.3
40	7	324	14,580	2,603	17.9
41	10	263	11,835	5,014	42.4
43	23	739	33,255	11,415	34.3
44	12	282	12,690	3,308	26.1
48	25	676	30,420	12,697	41.7
49	15	381	17,145	4,541	26.5
51	8	195	8,775	4,673	53.3
52	8	229	10,305	3,311	32.1
53	12	249	11,205	6,868	61.3
62	35	836	37,620	15,362	40.8
63	6	148	6,660	1,127	16.9
Total	303	8475	381,375	138,207	36.2

---

[1] Limited to institutions and facilities which were located on permanent sites as of October, 1965. New facilities under construction as of that date are included.

[2] Based on 45 total hours available for scheduling during a week.

of utilization of such facilities as that of general classrooms. This certainly is the case for Florida junior colleges. The extent of utilization of all teaching laboratories in these institutions was 36.2 per cent. The range was from 16.9 per cent to 61.3 per cent. It is difficult to state a desired level of utilization for teaching laboratories because they serve such a wide range of purposes. Some can be used for general instruction, wheras others, especially shops cannot be used for this purpose. Therefore, an institution which has a number of shops or other highly specialized laboratories will find it more difficult to obtain a high percentage of utilization of its teaching laboratories than will an institution in which the laboratories can be used for general instructional purposes.

It should be pointed out that some junior colleges have maintained very good utilization of their teaching laboratories. Utilization in excess of 40 per cent for such a facility should be considered good. Using the 40 per cent as the basis for computing utilization suggested, six of the Florida junior colleges exceeded that level. On the other hand, five have a utilization rate below 25 per cent.

Projected Space Needs for Academic Facilities in 1970

Space needs for Florida junior colleges projected to 1970 are shown in Table 22. The data are classified according to types of instruction related space. They are also summarized by "Total Net Space Needs" and "Total Gross Space Needs." The difference between these two totals represents unassignable space such as washrooms, halls, storage areas, stairways, bookstores, service areas, student center, and the like. The figures on needed space were obtained by computing the 1970 space needs of each institution and then deducting the permanent space available or under contract as of October, 1965. Appendix B contains a copy of the form that was used as a basis for projecting each institution's space needs. This form shows the factors used and calculations that were made. An explanation of the form is also included in the Appendix.

The junior colleges that are included in Table 22 are arranged in three groups according to the status of campus development as of

TABLE 22

PROJECTED SPACE NEEDS FOR ACADEMIC FACILITIES IN 1970
FLORIDA JUNIOR COLLEGES

			Instruction Related Space Needs by type (in square feet)				
Institution	Gross Space Needs	Gen.Class-rooms & teaching labs.	Library	Faculty & Adm. Offices	Indoor Phys. Educ.	Other Inst. Related Facilities	Ttl. (Net) Inst. Related Space Needs
I. Group A							
35[1]	1,334,723	326,800	144,808	179,369	75,968	151,163	878,108
33	489,618	85,760	71,574	58,445	68,248	38,090	322,117
32	313,105	33,680	51,626	45,990	49,009	25,685	205,990
48	275,786	55,760	18,634	23,117	57,864	26,063	181,438
53	275,714	51,360	30,851	28,508	54,024	16,648	181,391
44	225,430	52,240	37,731	15,846	32,800	9,692	148,309
62[2]	220,066	32,800	35,719	23,664	38,273	14,324	144,780
36	181,169	35,120	22,690	13,493	42,268	5,619	119,190
43	177,382	33,200	21,717	9,304	37,832	14,646	116,699
51	136,654	31,920	3,126	19,632	26,933	8,293	89,904
40	133,307	21,880	13,410	10,244	36,366	5,802	87,702
30	131,754	26,800	12,098	12,274	24,639	10,869	86,680
39	101,398	14,000	12,736	9,804	22,203	7,966	66,709
52	98,566	16,000	7,503	5,823	27,898	7,622	64,846
41	93,983	17,760	6,977	10,149	18,795	8,150	61,831
34	87,471	11,600	6,417	7,490	28,625	3,415	57,547
37	68,727	14,800	3,906	4,296	17,638	4,575	45,215
27	41,990	3,600	3,876	5,412	13,005	1,732	27,625
Total A	4,386,843	865,080	505,399	482,860	672,388	360,354	2,886,081

TABLE 22--Continued

Institution	Gross Space Needs	Instruction Related Space Needs by type (in square feet) Gen.Class- rooms and teaching labs.	Library	Faculty & Adm. Offices	Indoor Phys Educ.	Other Inst. Related Facilities	Ttl. (Net) Inst. Related Space Needs
Group B							
50	284,824	61,760	28,602	28,560	46,374	22,088	187,384
47	152,544	32,080	13,598	15,747	28,232	10,701	100,358
46	82,161	21,360	5,933	6,969	13,905	5,886	54,053
Total B	519,529	115,200	48,133	51,276	88,511	38,675	341,795
Group C							
74	514,339	122,800	61,961	50,680	60,484	42,456	338,381
75	388,155	88,960	44,932	37,140	53,564	30,770	255,366
70	133,724	34,480	11,022	10,060	22,837	9,577	87,976
71	121,957	31,760	9,935	9,210	20,588	8,742	80,235
73	97,867	26,000	7,741	7,590	16,043	7,012	64,386
72	53,857	15,520	3,804	4,350	7,875	3,883	35,432
Total C	1,309,899	319,520	139,395	119,030	181,391	102,440	861,776
Total A,B,C	6,216,271	1299,800	692,927	653,166	942,290	501,469	4,089,652

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[1] Three campuses are being developed for this institution. Their total physical plant needs are combined here.

[2] This institution has three permanent campuses in operation--the other two are Numbers 49 and 63. Their total physical plant needs are combined here.

Note: Orange authorized in 1961 but not established; therefore, not included in projections.

October, 1965. "Group A" includes institutions that were operating on permanent campus sites; "Group B", those that were operating on temporary campus sites; and "Group C", those that were newly established and had not begun operation. Institutions within each group are arranged in descending order based on projected "Total Gross Space Needs" for 1970. These groupings were made because institutions in Group "B" and Group "C" must construct all of their permanent facilities. Hence, their facility needs are greater in proportion to their projected enrollments than are those of institutions in Group "A." A special problem was presented in calculating facility needs for institutions in Group "C." Since they have not begun operation, there has been no opportunity for curriculum planning and development. In an effort to compensate for this problem, each institution in Group "C" was matched with a currently operating junior college in terms of size and type of community being served. The matched institution provided the basis for calculating the amount of various types of instructional space needs for the newly established institution.

The "Total Gross Space Needs" column in Table 22 shows that Florida junior colleges will need an additional 6,216,271 square feet of space by 1970 in order to provide adequate facilities for their anticipated enrollments as of that date.

As might be anticipated, the greatest need for instruction-related facilities will be for general classrooms and teaching laboratories. The space need for indoor physical education is the next largest. Three factors account for the magnitude of this need. First, physical education by its very nature requires considerable space. Second, virtually all junior college students are required to take two years of physical education. Third, nearly all existing institutions are grossly deficient in respect to their facilities for indoor physical education. In fact, eight of the institutions included in Group "A" have no permanent indoor physical education space at the present time. The projected need for library space is also considerable, amounting to more than half of the total need for additional classroom and laboratory space.

The extent of space needs among Florida junior colleges as projected to 1970 varies considerably. These variations as shown in Table 22 reflect both differences in projected enrollments and in existing permanent facilities to serve present enrollments. The older junior colleges, in general, have permanent facilities that are much more nearly adequate for their present enrollments than do the newer institutions. This is especially true in the case of institutions that are growing rapidly. For example, the projected total gross space need for Institution Number 35 is more than twice that of the institution with the next greatest need.

On the other hand, the data indicate that little expansion of certain facilities will be needed in some institutions. For example, Institution Number 51 will need little additional library space to serve adequately its 1970 projected enrollment. Likewise, the need for additional library space in Institution Number 48 will be much less than its need for additional classrooms and laboratories. The converse is true regarding the space needs in Institution Number 32.

In summary, the information presented in Table 22 should provide a basic guide for establishing priorities when planning for new physical facilities, both among institutions and within a given institution.

CHAPTER IV

FACILITY AND SPACE NEEDS FOR FLORIDA'S SENIOR COLLEGES AND UNIVERSITIES

Introduction

This chapter presents detailed information regarding senior college and university facilities in Florida as of October, 1965 and of their needs projected to 1970. Twenty institutions participated in the study. The two new state universities currently being developed are excluded from this part of the study.

The materials in this chapter are presented in three major sections: (1) An inventory of the existing physical plants; (2) An analysis of the utilization of existing facilities; and (3) Projections of facility and space needs by 1970.

Data on which the inventories, analyses, and projections shown in this report are based were obtained directly from the senior colleges and universities. The methodology employed in making the study and projecting facility needs for 1970 has been presented in Chapter I and is not herein repeated.

Inventory of Existing Physical Plants

The inventory of existing physical facilities of the 20 senior colleges and universities included in this report contains the following information: (1) An analysis of gross and assignable space; (2) An analysis of the classification of construction; (3) An analysis of the age of existing facilities; (4) An analysis of the future disposition of existing facilities; (5) Distribution of assignable space on a per student basis; (6) An analysis of general classroom space; (7) An analysis of teaching laboratory space; (8) An analysis of general classrooms on a student-station basis; and (9) An analysis of teaching laboratories on a student-station basis.

Analysis of Gross and Assignable Space

The amount and percentage distribution of total assignable and gross physical plant space for the 20 senior colleges and universities in Florida participating in this study is set forth in Table 23. This table shows the number of square feet currently available for general classrooms, laboratories, libraries, and in all other areas for teaching, research, and service programs involved. The institutions are not identified by name but it is obvious from total size of facilities that the larger and more complex institutions devote, in general, a smaller percentage of their total assignable space to general classroom and laboratory usage than do the smaller institutions. An average of approximately 11 per cent of assignable space is devoted to classrooms, 9 per cent to laboratories, and 8 per cent to library space. Non-assignable space averages 40 per cent of the gross. This figure is in line with nation-wide statistics.

Type of Construction

The amount and percentage of gross square feet of physical plant space classified as permanent, temporary, or makeshift construction is shown for each institution in Table 24. Permanent construction as a percentage of total construction varies from 100 per cent for six institutions to a low of 41 per cent for one institution. For all institutions taken together, an average of 94 per cent of all building space is classified as permanent. A total, however, of approximately 508,000 square feet of gross area now in use is classed as either temporary or makeshift.

Age of Existing Facilities

The age of buildings in Florida higher institutions, as indicated by the number of square feet constructed in different periods, reflects in dramatic fashion the spiraling demand for higher education and the growth of the state. For example, the data in Table 25 reveal that space in use as of October, 1965 is approximately four times that constructed prior to 1940, and 1.6 times that constructed prior to 1960. These total facilities consisting of more than eight million square feet of gross space represent in terms of current building costs an investment of more

TABLE 23

REPORTED GROSS SPACE, NON-ASSIGNABLE AND NET ASSIGNABLE PHYSICAL PLANT SPAC
FLORIDA SENIOR COLLEGES AND UNIVERSITIES

Inst. Code	TYPE OF FACILITY									
	General Classrooms		Teaching Labs.		Library		All Other Assignable Sp.[2]		Total Net Assignable	
	sq.ft.	%	sq.ft.	%	sq.ft.	%	sq.ft.	%	sq.ft.	%
01	46,147	9.0	76,712	15.0	25,553	5.0	187,100	36.7	335,512	65
02	35,165	7.4	45,254	9.6	40,373	8.5	184,777	39.1	305,569	64
03	89,362	6.6	90,043	6.9	78,448	5.8	476,853	35.2	734,706	54
04	212,527	8.7	131,132	5.4	135,956	5.6	866,651	35.6	1346,266	55
05	87,818	10.3	69,133	8.1	76,671	9.0	222,438	26.0	456,060	53
10	11,022	13.6	15,256	18.8	9,396	11.6	24,800	30.0	60,474	74
11	14,881	16.0	9,765	10.5	7,067	7.6	5,421	5.9	37,134	40
12	7,140	16.0	3,776	8.5	4,467	10.0	8,377	18.8	23,760	53
13	6,959	32.6	3,465	16.2	2,844	13.3	3,440	16.1	16,708	78
14	3,608	23.1	3,670	23.5	567	3.6	1,073	7.0	8,918	57
15	6,577	22.0	0	0.0	3,394	11.3	16,133	53.8	26,104	87
16	17,904	13.1	18,042	13.2	20,817	15.2	44,539	32.4	101,302	73
17	66,254	24.0	16,708	6.1	7,458	2.7	26,404	9.6	116,824	42
18	24,508	11.8	16,705	8.1	21,465	10.4	57,306	27.6	119,984	57
19	4,816	4.9	4,402	4.5	6,029	6.1	11,674	11.7	26,921	27
20	40,963	19.0	22,217	10.3	29,436	13.7	41,018	19.1	133,634	62
21	29,022	36.6	2,382	3.0	10,096	12.7	7,570	9.6	49,070	61
22	28,944	13.6	27,422	12.8	29,909	14.0	87,897	41.2	174,172	81
23	124,588	14.1	159,852	18.0	156,317	17.6	291,175	32.9	731,932	82
24	40,285	18.9	23,524	11.0	15,656	7.3	29,845	14.0	109,310	51
Total	898,490	10.9	739,460	9.0	681,919	8.3	2,594,491	31.5	4,914,360	59

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[1] Limited to institutions and facilities which were located on permanent sites a under construction as of that date are included.

[2] Includes all space not included in preceding categories which can be assigned

[3] Space for janitorial and building maintenance services or for non-assigned use general service areas).

TABLE 23

-ASSIGNABLE AND NET ASSIGNABLE PHYSICAL PLANT SPACE BY TYPE OF FACILITY[1] IN FLORIDA SENIOR COLLEGES AND UNIVERSITIES

	TYPE OF FACILITY								
	Library		All Other Assignable Sp.[2]		Total Net Assignable		Non-Assignable Space[3]		Total Gross
	sq.ft.	%	sq.ft.	%	sq.ft.	%	sq.ft.	%	sq.ft.
0	25,553	5.0	187,100	36.7	335,512	65.7	175,191	34.3	510,703
6	40,373	8.5	184,777	39.1	305,569	64.6	167,127	35.4	472,696
9	78,448	5.8	476,853	35.2	734,706	54.5	613,100	45.5	1347,806
4	135,956	5.6	866,651	35.6	1346,266	55.3	1088,127	44.7	2434,393
1	76,671	9.0	222,438	26.0	456,060	53.4	398,418	46.6	854,478
8	9,396	11.6	24,800	30.0	60,474	74.7	20,504	25.3	80,978
5	7,067	7.6	3,421	5.9	37,134	40.0	55,590	60.0	92,724
5	4,467	10.0	8,377	18.8	23,760	53.3	20,786	46.7	44,546
2	2,844	13.3	3,440	16.1	16,708	78.2	4,667	21.8	21,375
5	567	3.6	1,073	7.0	8,918	57.2	6,677	42.8	15,595
0	3,394	11.3	16,133	53.8	26,104	87.1	3,855	12.9	29,959
2	20,817	15.2	44,539	32.4	101,302	73.9	35,699	26.1	137,001
1	7,458	2.7	26,404	9.6	116,824	42.4	158,906	57.6	275,730
1	21,465	10.4	57,306	27.6	119,984	57.9	87,367	42.1	207,351
5	6,029	6.1	11,674	11.7	26,921	27.2	71,963	72.8	98,884
3	29,436	13.7	41,018	19.1	133,634	62.1	81,706	37.9	215,340
0	10,096	12.7	7,570	9.6	49,070	61.9	30,263	38.1	79,333
8	29,909	14.0	87,897	41.2	174,172	81.6	39,327	18.4	213,499
0	156,317	17.6	291,175	32.9	731,932	82.6	153,817	17.4	885,749
0	15,656	7.3	29,845	14.0	109,310	51.2	104,238	48.8	213,548
0	681,919	8.3	2,594,491	31.5	4,914,360	59.7	3,317,328	40.3	8,231,688

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facilities which were located on permanent sites as of October, 1965. New facilities e included.

ded in preceding categories which can be assigned for education related activities.

lding maintenance services or for non-assigned use (e.g., public washrooms and

TABLE 24

OUTSIDE GROSS SQUARE FEET OF PHYSICAL PLANT SPACE CLASSIFIED AS PERMANENT, TEMPORARY AND MAKESHIFT CONSTRUCTION[1] FLORIDA SENIOR COLLEGES AND UNIVERSITIES

	TYPE OF CONSTRUCTION							
Inst. Code	Permanent sq.ft.	%	Temporary sq.ft.	%	Makeshift sq.ft.	%	Total sq.ft.	%
01	468,271	91.7	42,432	8.3			510,703	100.0
02	472,696	100.0					472,696	100.0
03	1328,482	98.6	19,324	1.4			1347,806	100.0
04	2224,820	91.4	209,573	8.6			2434,393	100.0
05	854,478	100.0					854,478	100.0
10	80,978	100.0					80,978	100.0
11	92,724	100.0					92,724	100.0
12	44,546	100.0					44,546	100.0
13	21,375	100.0					21,375	100.0
14	6,400	41.0	9,195	59.0			15,595	100.0
15	25,579	85.4	4,380	14.6			29,959	100.0
16	136,569	99.7	432	.3			137,001	100.0
17	262,658	95.3	13,072	4.7			275,730	100.0
18	199,575	96.2	7,776	3.8			207,351	100.0
19	88,170	89.2	9,764	9.9			98,884	100.0
20	159,745	74.2	55,595	25.8			215,340	100.0
21	67,909	85.6	11,424	14.4			79,333	100.0
22	182,104	85.3	31,395	14.7			213,499	100.0
23	798,385	90.1	87,364	9.9			885,749	100.0
24	206,873	96.9	6,675	3.1			213,548	100.0
Total	7,722,337	93.8	508,401	6.2	0	0.0	8231,688	100.0

[1] Limited to institutions and facilities which were located on permanent sites as of October, 1965. New facilities under construction as of that date are included.

TABLE 25

OUTSIDE GROSS SQUARE FEET OF PHYSICAL PLANT SPACE CLASSIFIED AS TO PERIOD WHEN CONSTRUCTED[1] FLORIDA SENIOR COLLEGES AND UNIVERSITIES

	PERIOD WHEN CONSTRUCTED					
Inst.	Before 1940		1940-1959		1960 and later	
Code	sq.ft.	%	sq.ft.	%	sq.ft.	%
01	109,423	21.5	359,542	70.4	41,738	8.2
02					472,696	100.0
03	639,901	47.4	597,535	44.3	110,370	8.2
04	661,076	27.2	1012,663	41.6	760,654	31.2
05					854,478	100.0
10			80,978	100.0		
11			38,000	41.0	54,724	59.0
12					44,546	100.0
13					21,375	100.0
14			9,195	59.0	6,400	41.0
15	20,520	68.5	7,189	24.0	2,250	7.5
16					137,001	100.0
17	98,359	35.7	130,371	47.3	47,000	17.0
18			169,534	81.8	37,817	18.2
19	23,421	23.7	10,120	10.2	65,343	66.1
20	123,164	57.2	59,153	27.5	33,023	15.3
21			52,715	66.4	26,618	33.6
22	150,602	70.5	16,651	7.8	46,246	21.7
23	124,846	14.1	489,072	55.2	271,831	30.7
24	179,918	84.2	28,415	13.3	5,215	2.4
Total	2,111,230	25.7	3,061,133	37.3	3039,325	37.0
Cumulative Total	2,111,230		5,172,363		8211,688	

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[1] Limited to institutions and facilities which were located on permanent sites as of October, 1965. New facilities under construction as of that date are included.

than two billion dollars. The state is fortunate in that three-fourths of all higher education facilities have been constructed in the state since 1940. In general, buildings constructed prior to 1940 are now due for major rehabilitation in most states.

In contemplating construction programs, new standards for buildings should be taken into account. For example, in southern climates, it is now considered that with year-round operations, all buildings should be air-conditioned. This could well mean that a majority of buildings constructed prior to 1960 would need to be considered in this category.

Future Disposition of Existing Facilities

Future projected use of facilities by institutions is shown in Table 26. The category of "no change" varies from 100 per cent to 16.7 per cent. Total space to be abandoned amounts to 253,111 square feet; abandoned and rehabilitated, 44,316 square feet; and converted to other use, 162,677 square feet.

The gross square footage of physical plant space in use and not owned by institutions amounts to 190,394. Only four of the 20 institutions report that they use such space.

Utilization of Existing Facilities

The amount of assignable physical plant space in terms of type of space per student is shown in Table 27. Total assignable space per student varied from a low of 35.7 square feet to a high of 199.6 square feet, the average amount for all students being 86.1 square feet. General classroom space per student ranges from 8.1 to 39.6 square feet per student. Laboratory and shop space ranges from 0 to 29.6 square feet per student. Library space per student averages 11.9 square feet, the range being 3.2 to 35.3 square feet.

Analysis of General Classroom Space

An analysis of general classroom space is presented in Table 28. A total of 967 classrooms in the 20 institutions surveyed averaged 669 square feet in size. Average size of classrooms shown by institutions, however, ranges from 318 to 999 square feet. A total of 42,117 actual student stations were available for students. Actual

TABLE 26

ANTICIPATED FUTURE DISPOSITION OF EXISTING FACILITIES[1] FLORIDA SENIOR COLLEGES AND UNIVERSITIES

	FUTURE DISPOSITION						Convert to Other Use	
Inst. Code	No Change sq.ft.	%	Abandon sq.ft.	%	Rehabilitate sq.ft.	%	Sq.ft.	%
01	423,766	83.0	42,432	8.3			44,505	8.7
02	472,696	100.0						
03	1,283,380	95.2	22,610	1.6	41,816	3.1		
04	2,434,393	100.0						
05	854,478	100.0						
10	80,978	100.0						
11	92,724	100.0						
12	44,546	100.0						
13	21,375	100.0						
14							15,595	100.0
15			21,839	72.9			8,120	27.1
16	136,569	99.7					432	.3
17	268,858	97.5					6,872	2.5
18	203,463	98.1					3,888	1.9
19	16,512	16.7	15,123	15.3			67,249	68.0
20	148,249	68.8	64,591	30.0	2,500	1.2		
21	67,909	85.6	11,424	14.4				
22	166,088	77.8	31,395	14.7			16,016	7.5
23	848,727	95.8	37,022	4.2				
24	206,873	96.9	6,675	3.1				
Total	7771,584	94.4	253,111	3.1	44,316	.5	162,677	2.0

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[1] Limited to institutions and facilities which were located on permanent sites as of October, 1965. New facilities under construction as of that date are included.

TABLE 27

DISTRIBUTION OF ASSIGNABLE SPACE ON A PER STUDENT BASIS[1]
(Expressed in Square Feet Per Full-Time Equivalent Student)
FLORIDA SENIOR COLLEGES AND UNIVERSITIES

Inst. Code	1965 FTE Enrollment	Total Assignable Space	SQ. FT. OF ASSIGNABLE SPACE PER STUDENT				
			Total	General Classroom	Teaching Laboratories	Library	All Other[2]
01	3184	335,512	105.4	14.5	24.1	8.0	58.8
02	1531	305,569	199.6	23.0	29.6	26.4	120.6
03	10,968	734,706	67.0	8.1	8.2	7.2	43.5
04	13,707	1346,266	98.2	15.5	9.6	9.9	63.2
05	5836	456,060	78.1	15.0	11.8	13.1	38.2
10	663	60,474	91.2	16.6	23.0	14.2	37.4
11	935	37,134	39.7	15.9	10.4	7.6	5.8
12	260	23,760	91.4	27.5	14.5	17.2	32.2
13	468	16,708	35.7	14.9	7.4	6.1	7.3
14	180	8,918	49.5	20.0	20.4	3.2	5.9
15	427	26,104	61.1	15.4	0	7.9	37.8
16	772	101,302	131.2	23.2	23.4	27.0	57.6
17	1675	116,824	69.7	39.6	10.0	4.5	15.6
18	1984	119,984	60.5	12.4	8.4	10.8	28.9
19	171	26,921	157.4	28.2	25.7	35.3	68.2
20	1408	133,634	94.9	29.1	15.8	20.9	29.1
21	890	49,070	55.1	32.6	2.7	11.3	8.5
22	1487	174,172	117.1	19.5	18.4	20.1	59.1
23	8740	731,932	83.7	14.3	18.3	17.9	33.2
24	1790	109,310	61.1	22.5	13.1	8.7	16.8
Total	57,076	4,914,360	86.1	15.7	13.0	11.9	45.5

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[1] Limited to institutions and facilities which were located on permanent sites as of October, 1965. New facilities under construction as of that date are included.

[2] Includes all space not included in preceding categories which can be assigned for education related activities.

TABLE 28

AN ANALYSIS OF GENERAL CLASSROOM SPACE[1]
FLORIDA SENIOR COLLEGES AND UNIVERSITIES

Inst. Code	No. of General Classrooms[2]			Sq.ft. of Space	Avg. Rm. Size (sq.ft.)	No. of Student Stations	Sq.ft. per Student Station	Optimum No. of Student Stations[3]
	Total	Perm.	Temp.					
01	63	60	3	40,249	638.9	2803	14.4	2683.3
02	37	37		19,869	537.0	1276	15.6	1324.6
03	135	133	2	86,041	637.3	5611	15.3	5736.1
04	230	217	13	144,248	627.2	9482	15.2	9616.5
05	66	62	4	42,008	636.5	3165	13.3	2800.5
10	18	18		11,022	612.3	804	13.7	734.8
11	23	20	3	15,651	680.5	933	16.8	1043.4
12	7	7		5,416	773.7	258	21.0	361.1
13	11	11		6,192	562.9	400	15.5	412.8
14	8	8		3,608	451.0	228	15.8	240.5
15	8	8		3,096	387.0	295	10.5	206.4
16	17	17		10,935	643.2	682	16.0	729.0
17	64	43	21	63,957	999.3	2572	24.9	4263.8
18	36	34	2	23,712	658.7	1498	15.8	1580.8
19	11	2	9	3,501	318.3	195	18.0	233.4
20	45	30	15	26,250	583.3	1545	17.0	1750.0
21	15	13	2	9,932	662.1	613	16.2	662.1
22	40	28	12	26,168	654.2	1969	13.3	1744.5
23	106	99	7	93,465	881.7	6895	13.6	6231.0
24	27	27		11,711	433.7	893	13.1	780.7
Total	967	874	93	647,031	669.1	42,117	15.4	43,135

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[1] Limited to institutions and facilities which were located on permanent sites as of October, 1965. New facilities under construction as of that date are included.

[2] This includes classrooms classified as "makeshift."

[3] Based on 15 sq. ft. per student station, a figure frequently used for projecting general classroom space needs for junior colleges.

student stations averaged 15.4 feet per station as compared with a projected minimum of 15. Actual student stations, therefore, closely approximate the optimum maximum stations that can be accommodated in space available. Approximately 90 per cent (874) of all classrooms were classified as existing in permanent construction.

Analysis of Laboratory Space

Space required for laboratories varies widely with the nature of the subject and level of study. A generally accepted minimum average is 40 square feet per student. An analysis of laboratory space is presented in Table 29. The 11,883 existing student laboratory stations in Florida institutions averaged 36.5 square feet. The range by institutions was from 21.4 to 79.4 square feet. In larger institutions, however, the size varied only slighly from the projected figure of 40 feet. Three hundred eighty-four of 447 laboratories were located in permanent construction. The optimum number of stations (10,855) was slightly less than the actual number of stations in use (11,883).

Distribution of Classrooms by Student-Station Capacity

An inventory of classrooms shown by capacity of rooms, and percentage distribution by capacity is shown for the 20 institutions in Table 30. Of the 967 classrooms reported 393 or 40.6 per cent were in the 20-39 capacity range, and 374, or 38.7 per cent in the 40-59 capacity range. An inspection of the materials in Table 30 reveals considerable variation in the percentage distribution by capacity among individual institutions. For example, Institution Number 19 reported no rooms with more than 29 capacity while Institution Number 5 reported no rooms with fewer than 30 capacity. Two institutions reported more than 10 per cent of all classrooms with 100 plus capacity. The wide variation in percentage distribution by capacity may reflect variation in teaching practices and philosophy as well as size of institution and program variation.

Distribution of Teaching Laboratories by Student-Station Capacity

The inventory and the percentage distribution of teaching laboratories by capacity of rooms are shown in Table 31. The previous table revealed the fact that the majority of classrooms were in the

TABLE 29

AN ANALYSIS OF TEACHING LABORATORY SPACE[1]
FLORIDA SENIOR COLLEGES AND UNIVERSITIES

Inst. Code	No. of Teaching Laboratories			Sq.ft. of Space	Avg. Lab Size (sq.ft.)	No. of Student Stations	Sq.ft. per Student Station	Optimum No. of Student Stations[3]
	Total	Perm.	Temp.[2]					
01	48	46	2	47,773	995.3	1319	36.2	1194.3
02	9	9		11,145	1238.3	250	44.6	278.6
03	79	79		72,001	911.4	2013	35.8	1800.0
04	82	69	13	85,879	1047.3	2080	41.3	2147.0
05	37	37		38,408	1038.1	937	41.0	960.2
10	17	17		15,256	897.4	303	50.3	381.4
11	5	5		3,597	719.4	141	25.5	89.9
12	2	2		2,620	1310.0	33	79.4	65.5
13	2	2		2,540	1270.0	55	46.2	63.5
14	5	4	1	3,102	620.4	123	25.2	77.6
15	3		3	2,700	900.0	93	29.0	67.5
16	4	4		2,353	588.3	110	21.4	58.8
17	10	10		10,246	1024.6	308	33.3	256.2
18	16	16		12,045	752.8	340	35.4	301.1
19	3	1	2	2,859	953	75	38.1	71.5
20	24	14	10	14,637	609.9	636	23.0	365.9
21	6	5	1	5,700	950.0	159	35.8	142.5
22	21	17	4	24,884	1185.0	1049	23.7	622.1
23	58	34	24	55,527	957.4	1430	38.8	1388.2
24	16	13	3	20,950	1309.4	429	48.8	523.8
Total	447	384	63	434,222	971.4	11,883	36.54	10,855

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[1] Limited to institutions and facilities which were located on permanent sites as of October, 1965. New facilities under construction as of that date are included.

[2] This includes laboratories classified as "makeshift."

[3] Based on 40 sq. ft. per student station, a figure frequently used for projecting teaching laboratory space for junior colleges.

TABLE 30

DISTRIBUTION OF GENERAL CLASSROOMS BY STUDENT STATION CAPACITY[1] FLORIDA SENIOR COLLEGES AND UNIVERSITIES

	STUDENT CAPACITY									
Inst. Code	Under 20		20-39		40-59		60-99		100 & Over	
	N.	%	N.	%	N.	%	N.	%	N.	%
01	8	12.7	23	36.5	22	34.9	6	9.5	4	6.3
02	12	32.4	19	51.3			2	5.4	4	10.8
03	4	2.9	53	39.2	60	44.4	18	13.4		
04	15	6.5	102	44.3	89	38.7	20	8.7	4	1.7
05			11	16.7	51	77.3	4	6.0		
10	1	5.6	7	38.9	7	38.9	2	11.2	1	5.6
11			10	43.5	12	52.1	1	4.3		
12			3	42.9	4	57.1				
13			9	81.8	2	18.2				
14	1	12.5	5	62.5	2	25.0				
15			3	37.5	5	62.5				
16			10	58.8	2	11.8	4	23.5	1	5.9
17	5	7.8	31	48.5	18	28.2	9	14.1	1	1.6
18			14	38.9	19	52.8	3	8.3		
19	7	63.6	4	36.4						
20			29	64.4	16	35.6				
21	1	6.7	7	46.6	6	40.0			1	6.7
22	1	2.5	11	27.5	17	42.5	10	25.0	1	2.5
23	6	5.6	26	24.6	35	33.1	28	26.4	11	10.4
24	3	11.1	16	59.2	7	25.9	1	3.7		
Total	64	6.6	393	40.6	374	38.7	108	11.2	28	2.9

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[1] Limited to institutions and facilities which were located on permanent sites as of October, 1965. New facilities under construction as of that date are included.

TABLE 31

DISTRIBUTION OF TEACHING LABORATORIES BY STUDENT STATION CAPACITY[1] FLORIDA SENIOR COLLEGES AND UNIVERSITIES

	STUDENT CAPACITY											
Inst.	Under 20		20-29		30-39		40-79		80-99		100& Over	
Code	N.	%	N.	%	N.	%	N.	%	N.	%	N.	%
01	16	33.3	18	37.5	8	16.7	3	6.3	1	2.1	2	4.2
02	2	22.2	1	11.1	6	66.7						
03	22	27.9	29	36.7	16	20.3	12	15.2				
04	35	42.7	25	30.5	13	15.9	6	7.2	1	1.2	2	2.4
05			30	81.1	6	16.2	1	2.7				
10	12	70.6	3	17.6	2	11.8						
11			3	60.0	2	40.0						
12	2	100.0										
13			1	50.0	1	50.0						
14	2	40.0	1	20.0	2	40.0						
15			2	66.7			1	33.3				
16			2	50.0	2	50.0						
17	2	20.0	3	30.0	3	30.0	2	20.0				
18	7	43.8	5	31.3	3	18.8	1	6.3				
19	1	33.3			2	66.7						
20	6	25.0	12	50.0	4	16.7	1	4.2			1	4.2
21	1	16.7	2	33.3	3	50.0						
22	2	9.5	6	28.6	8	38.1	3	14.3	1	4.8	1	4.8
23	26	44.8	11	19.0	10	17.2	11	18.9				
24	3	18.8	6	37.5	6	37.5	1	6.3				
Ttl.	139	31.1	160	35.8	97	21.7	42	9.4	3	.7	6	1.3

---

[1] Limited to institutions and facilities which were located on permanent sites as of October, 1965. New facilities under construction as of that date are included.

20 to 59 capacity range; whereas, Table 31 shows that approximately two-thirds of all laboratories have a student capacity of fewer than 30 and almost 90 per cent with a capacity of fewer than 40.

Analysis of Utilization of Facilities

General Classroom Utilization on a Per Week Basis

Space utilization studies are made today by most major institutions on a continuing basis. Table 32 sets forth an analysis of general classroom student station utilization in the Florida higher institutions on a per week basis. In this study 45 hours per week is considered the maximum number of hours for scheduling a classroom per week. Thus Institution 13 with 400 student stations could theoretically accommodate 18,000 student hours per week (400 times 45). Table 32 shows, however, that a total of 6,676 student hours per week were scheduled in that institution during the fall of 1965. This figure represents a percentage utilization of all student stations for 45 hours per week of 37.1 per cent. A utilization rate of 37.1 per cent represents 100 per cent utilization of all stations for 16.7 hours per week.

The utilization rate given in the example above varies only slightly from one widely accepted utilization standard. The California Master Plan standard requires a classroom to be used 30 hours per week, to have 60 per cent of the student stations used when the room is scheduled, to have each student station used 18 hours per week, and 15 square feet per student station. Thus on a 45 hour week for each student station, a standard of 40 per cent produces 18 hours.

In Florida, the percentage of student station utilization averaged 36.8 or 3.2 per cent below the California standard. It will be noted that five institutions (3, 4, 5, 18, and 23) either approximated or exceeded the California standard. It is obvious from studying Table 32 that classroom space is currently not the limiting factor on enrollment for a number of Florida institutions. It should be pointed out, however, that all related factors should be taken into consideration in drawing conclusions concerning classroom needs for any one institution. For example, institution

TABLE 32

AN ANALYSIS OF GENERAL CLASSROOM STUDENT STATION UTILIZATION ON A PER WEEK BASIS[1] FLORIDA SENIOR COLLEGES AND UNIVERSITIES

Inst. Code	No. of Rooms	No. of Student Stations	Possible Student Hours[2]	Actual Student Hours	Percentage of Student Station Utilization	California Standard 40%
01	63	2803	126,135	39,780	31.5	-8.5
02	37	1276	57,420	18,617	32.4	-7.6
03	135	5611	252,495	115,310	45.7	+5.7
04	230	9482	426,690	168,599	39.5	-0.5
05	66	3165	142,425	68,921	48.4	+8.4
10	18	804	36,180	11,366	31.4	-8.6
11	23	933	41,985	10,446	24.9	-15.1
12	7	258	11,610	3,128	26.9	-13.1
13	11	400	18,000	6,676	37.1	-2.9
14	8	228	10,260	3,019	29.4	-10.6
15	8	295	13,275	4,386	33.0	-7.0
16	17	682	30,690	8,949	29.2	-10.8
17	64	2572	115,740	21,091	18.2	-21.8
18	36	1498	67,410	27,873	41.3	+ 1.3
19	11	195	8,775	1,791	20.4	-19.6
20	45	1545	69,525	19,406	27.9	-12.1
21	15	613	27,585	8,246	29.9	-10.1
22	21	1049	47,205	3,189	6.8	-33.2
23	106	6895	310,275	127,033	40.9	+0.9
24	27	893	40,185	14,707	36.6	-3.4
Total	948	41,197	1,853,865	682,533	36.8	-3.2

---

[1] Limited to institutions and facilities which were located on permanent sites as of October, 1965. New facilities under construction as of that date are included.

[2] Based on 45 total hours available for scheduling during a week.

number 20 shows a percentage of student station utilization of only 27.9 but Table 26 reveals that 30 per cent of all space at that institution should be abandoned.

Teaching Laboratory Utilization on a Per Week Basis

An analysis of teaching laboratory student station utilization on a 45 hour per week basis is given in Table 33. The percentage of laboratory utilization has been computed by multiplying the number of stations by 45, and dividing the number of actual student hours scheduled for the fall of 1965 by the resulting number. For example, institution number 4, with 2,080 laboratory stations, has a maximum possible 93,600 student hours and an actual registration of 32,379 hours per week, or 34.6 per cent utilization. It will be noted that the California Master Plan standard for laboratory utilization converted to the Florida Study method equals 35 per cent. Percentage utilization for the 20 institutions participating in this study averaged 24.9.

Projected Space Needs for 1970

The determination of academic facility needs has not been approached through carefully organized methods in most states. The tremendous expansion of demand for higher education has brought about a real need for making comparative studies of building requirements based upon an inventory of existing facilities, reasonable utilization standards, and projected enrollment demands. In developing an estimate of space needs of Florida higher institutions for 1970, objective data have been utilized.

Classrooms and Teaching Laboratories

Many studies utilize space factors for projecting both classroom and teaching laboratory needs. The authors of this study, however, believe that the most acceptable basis for such determination resides in the consideration of an actual course by course schedule analysis over against classrooms and laboratories available for scheduling.

Utilization ratio standards for classrooms are 60 per cent and for laboratories it is 50 per cent based on a 45 hour per week

TABLE 33

AN ANALYSIS OF TEACHING LABORATORY STUDENT STATION UTILIZATION ON A PER WEEK BASIS[1]

FLORIDA SENIOR COLLEGES AND UNIVERSITIES

Inst. Code	No. of Rooms	No. of Student Stations	Possible Student Hours[2]	Actual Student Hours	Percentage Student Sta. Utilization	+ or - California Standard of 35% [3]
01	48	1319	59,355	9259	15.6	-19.4
02	9	250	11,250	2736	24.3	-10.7
03	79	2013	90,585	29,262	32.3	-2.7
04	82	2080	93,600	32,379	34.6	-0.4
05	37	937	42,165	11,928	28.3	-6.7
10	17	303	13,635	3381	24.8	-10.2
11	5	141	6345	1761	27.8	-7.2
12	2	33	1485	297	20.0	-15.0
13	2	55	2475	734	29.7	-5.3
14	5	123	5535	506	9.1	-25.9
15	3	93	4185	1243	29.7	-5.3
16	4	110	4950	989	20.0	-15.0
17	10	308	13,860	1691	12.2	-22.8
18	16	340	15,300	3735	24.4	-10.6
19	3	75	3375	533	15.8	-19.2
20	24	636	28,620	4414	15.4	-19.6
21	6	159	7,155	2012	28.1	-6.9
22	21	1049	47,205	3189	6.8	-28.2
23	58	1430	64,350	17,244	26.8	-8.2
24	16	429	19,305	5,635	29.2	-5.8
Total	447	11,883	534,735	132,928	24.9	-10.1

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[1] Limited to institutions and facilities which were located on permanent sites as of October, 1965. New facilities under construction as of that date are included.

[2] Based on 45 total hours available for scheduling during a week.

[3] California Master Plan is 16 hours per week per station or 35% of 45.

availability. Additional classrooms needed by Florida senior colleges and universities for instruction by 1970 are shown for each institution in Table 34.

TABLE 34

ADDITIONAL CLASSROOMS AND LABORATORIES NEEDED IN 1970
FLORIDA SENIOR COLLEGES AND UNIVERSITIES

Institution	Additional Classrooms Needed	Additional Labs Needed
1	0	18
2	86	2
3	57	5
4	0	21
5	76	2
10	6	2
11	0	5
12	7	2
13	13	3
14	0	0
15	5	4
16	0	4
17	0	0
18	29	0
19	15	11
20	11	4
21	15	2
22	0	5
23	21	18
24	1	0
Totals	342	108

Space estimates for classrooms are based on the following capacities and sizes:

Capacity	Size
1 to 20	400 square feet
20 to 40	720 square feet
40 to 60	1200 square feet
60 to 100	1600 square feet
100 to 200	2000 square feet

The need for additional teaching laboratories for each institution has been determined through the same procedure as that utilized for analyzing classroom needs. Space calculations for laboratories, however, have been averaged at an estimate of 1600 square feet per teaching laboratory. The number of additional teaching laboratories needed by each institution is shown in Table 34.

Other Teaching Facilities

Space requirements for other teaching facilities include all other rooms and areas regularly used or intended for use for scheduled class meetings or individual instruction, such as music rehearsal rooms and studios, playing floors, physical education rooms, indoor swimming pools, and indoor track and field areas used for instructional purposes. A comparative estimate of space needs for 1970 has been made by multiplying five per cent of current number of student hours per week by 16 square feet, by the "projection ratio" for each institution.[1] This basis has been utilized on the assumption that approximately five per cent of all student contact hours in instructional service will be in areas other than classrooms, laboratories, and traditional type library space.

It is generally considered that 16 square feet for five per cent of all student hours per week is a conservative estimate for this type of space. Space needs in this category are shown in Table 35.

Teaching Faculty Office Space

This study assumes that each equivalent full-time faculty member should be provided an office averaging 140 square feet of

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[1] This ratio was derived by dividing the projected FTES for 1970 by the FTES in 1965 for each institution.

TABLE 35

PROJECTED ADDITIONAL SPACE NEEDS FOR 1970
FLORIDA SENIOR COLLEGES AND UNIVERSITIES

Inst.	Gross Space Needs	Classroom & Lab Space	Other Teaching Facilities	Faculty Ofc. Space	Library Space	Svc. for teach Facil
1	111,169	28,800	-	9,929	15,666	3,4
2	339,810	66,400	47,454	26,713	64,514	4,5
3	312,160	30,800	42,119	20,853	66,076	3,6
4	480,421	33,600	165,492	11,227	29,752	4,0
5	429,780	40,240	114,454	31,385	13,460	4,8
10	54,529	5,600	14,242	8,378	3,695	6
11	74,755	8,000	13,176	3,961	6,690	9
12	58,887	8,240	11,295	4,634	5,553	9
13	81,160	12,080	12,678	10,472	6,085	1,4
14	14,742	0	2,872	1,681	1,354	1,3
15	35,382	10,400	3,283	3,758	4,205	1,2
16	24,657	6,400	2,014	2,851	0	7
17	89,499	0	24,139	8,337	16,552	0
18	111,615	12,880	19,825	12,150	8,508	1,5
19	64,522	25,920	6,559	0	4,140	3,1
20	80,103	10,800	19,787	8,168	291	1,2
21	118,509	12,400	25,719	11,184	5,199	1,4
22	23,391	8,000	0	0	0	9
23	280,093	37,200	104,692	17,378	0	4,4
24	34,116	400	16,109	0	9	
Totals	2,819,300	358,160	645,909	193,059	251,749	40,8

TABLE 35

PROJECTED ADDITIONAL SPACE NEEDS FOR 1970 FLORIDA SENIOR COLLEGES AND UNIVERSITIES

Other Teaching Facilities	Faculty Ofc. Space	Library Space	Svc.Areas for teaching Facilities	Admin. Facilities	Other Inst. Related Space	Net Assign. Inst. Related Sp.
-	9,929	15,666	3,456	16,262	0	74,113
47,454	26,713	64,514	4,512	0	16,947	226,540
42,119	20,853	66,076	3,696	0	44,563	208,107
165,492	11,227	29,752	4,032	0	76,178	320,281
114,454	31,385	13,460	4,829	39,799	42,353	286,520
14,242	8,378	3,695	672	3,766	0	36,353
13,176	3,961	6,690	960	9,509	7,541	49,837
11,295	4,634	5,553	989	3,352	5,195	39,258
12,678	10,472	6,085	1,450	5,361	5,981	54,107
2,872	1,681	1,354	1,350	1,469	1,102	9,828
3,283	3,758	4,205	1,248	589	105	23,588
2,014	2,851	0	768	1,641	2,764	16,438
24,139	8,337	16,552	0	384	10,254	59,666
19,825	12,150	8,508	1,546	13,244	6,257	74,410
6,559	0	4,140	3,110	840	2,446	43,015
19,787	8,168	291	1,296	2,669	10,391	53,402
25,719	11,184	5,199	1,488	12,111	10,905	79,006
0	0	0	960	5,988	646	15,594
104,692	17,378	0	4,464	22,995	0	186,729
16,109	0	9	48	1,430	4,748	22,744
645,909	193,059	251,749	40,874	141,409	248,376	1879,536

floor space. In determining office space needs, it has been recognized that the number of faculty members required will vary greatly in terms of program requirements. For example, the number of faculty members needed per 100 students will be greater at the graduate level than at the senior division level, and greater at the senior division level than at the junior division level. This study assumes that one equivalent full-time faculty member will be needed for teaching as follows:

Junior Division - One per 325 student hours per week
Senior Division - One per 200 student hours per week

Utilizing student hours per week as shown above, space factors for each level were derived by dividing 140 square feet by the number of student hours per faculty member. Thus a space factor of .43 square feet per student hour per week is derived as the number of square feet needed for office space at the junior division level. The factor for the senior division is .68. These factors were then applied to the number of 1965 student hours per week to derive total space currently needed. Total current office space needs were then multiplied by each institution's projection ratio to determine office space needs for 1970. Calculated office space needs in addition to current requirements are indicated for each institution in Table 35.

Library Space Needs

Library space requirements may be classified in four general categories--reading room space, carrels, service area, and stack space. Accreditation requirements, in general, require that 25 per cent of the student body should be provided seating space in the reading rooms at a given time. Assuming that 18 square feet of assignable area are required for one seating space, the space factor of 4.25 square feet per student was derived. Carrel space should be provided for at least one of every 12 students who are to be accommodated in the library. A space factor of 20 square feet each for two per cent of the student body will provide for this space.

Floor space needed for library service is generally recognized as requiring at least one-third of the total space required for reading rooms and carrels. Stack space needed has been computed on the basis that one square foot of stack space is needed for each ten volumes in the library.

Additional library space needs for each institution in 1970 are shown in Table 35.

Service Areas for Teaching Facilities

Service areas which adjoin and are used in conjunction with general classrooms, instructional laboratories or shops, or other teaching facilities are estimated to require 12 per cent of the total assignable space for classrooms and laboratories. Space needs in 1970 for instructional service areas are reported for each institution in Table 35.

Administrative Facilities

Space requirements for administrative facilities include all rooms or groups of rooms with office-type equipment, other than those meeting the definition of "faculty offices," which are used for the performance of administrative or clerical duties related to the educational or research program of the institution. This study assumes a need for a minimum of eight square feet of space per equivalent full-time student for this purpose.

Additional administrative space requirements needed in 1970 are shown for each institution in Table 35.

Other Instruction-Related Facilities

Space needs for other instruction-related facilities include all types of rooms or facilities not included in one of the previously reported categories, which are related to the instructional or research program of the institution. This comparative study assumes a minimum need of six square feet per equivalent full-time student. Additional space needs for each institution in 1970 are shown in Table 35.

Summary of Gross Space Needs for Academic Facilities by 1970

A summary of the total new academic space needed by each institution by 1970 is shown in Table 35. This table reveals that immediate financing is needed to provide for 2,819,300 square feet of space for academic facilities.

CHAPTER V

SUMMARY OF THE FINDINGS AND CONCLUSIONS

Purpose and Scope of the Study

The purpose of this Study was to survey the undergraduate academic facilities in use by higher education institutions in the State of Florida and to project the needs for classrooms, laboratories, and other types of space for the year 1970-71. Inventories and other information reported with regard to existing space were submitted by representatives from each institution whose leadership had consented to participate in the Study. A total of 54 institutions submitted data forms. The data collected were those describing facilities in use and under construction as of October, 1965.

Data for the most part were processed by computer techniques. Data gathering forms were prepared for keypunching, and the data obtained from the various institutions were compiled and tabulated by computer. All of the data that were processed have not been included in the completed Report. For example, data on courses and course enrollments have not been discussed; however, they have been used as the basis for deriving indices for projecting classroom and laboratory needs in the year 1970-71.

Enrollment Projections

Projections were made of the number of full-time equivalent students who will be enrolled in undergraduate study in the colleges and universities of the State in 1970-71. The projections were made in terms of full-time equivalent students.

The number of high school graduates in each county of the State were used as basic data for the projection of the college enrollment. Projections of high school graduates were made by individual county school unit and cumulated to obtain totals for junior college districts and for the state as a whole. The number of high school students who will be graduating in 1970 was projected to be 71,753 which is a 33.1 per cent increase over those who graduated in 1964.

The undergraduate full-time equivalent student enrollment in Florida colleges and universities included in this Study is projected to total 180,692 in the academic year 1970-71. In 1960 the combined FTE student enrollment was 50,306 and in 1964 it was 88,591. The percentage increase from 1960 to 1964 was 76.1 per cent and the projected percentage increase to 1970 is 104 per cent.

The private institutions in the State enrolled 16,959 FTE students in 1960, 19,056 in 1964, and 26,283 are projected in 1970. This is a 55 per cent increase in a decade.

The state university system enrolled 21,475 FTE students in 1960, 30,152 in 1964, and its projected 1970 FTE enrollment is 48,436. This is an increase of 125 per cent in a decade excluding the expanding enrollments at the graduate level.

In 1960, the public junior colleges of the State enrolled 11,872 FTE students. By 1964, the system enrolled 39,383 and its projected enrollment in 1970 is 105,973. The projected enrollment amounts to an increase of 790 per cent in one decade.

According to the projected data for the academic year 1970-71, the state universities will probably enroll 26.8 per cent of the post high school students; the junior colleges, 58.7 per cent; and the private institutions, 14.5 per cent. This is compared with data for 1964 which shows that the state universities enrolled 34 per cent; the private institutions, 21.5 per cent; and the junior colleges, 44.5 per cent.

Table 36 includes the projected number of FTE students

TABLE 36

SUMMARY OF PROJECTED 1970 FTE UNDERGRADUATE ENROLLMENT IN FLORIDA COLLEGES AND UNIVERSITIES

Institution	1970 FTE Enr.	Institution	1970 FTE Enr.
State Universities			
U. of Florida	13,535	FAMU	3,469
U. of S. Florida	10,486	U. of W. Florida	3,180
Fla. State U.	10,276	Florida Tech. U.	2,602
Fla. Atlantic U.	4,818		
Private Colleges and Universities			
U. of Miami	8,384	Bethune-Cookman	1,262
Jacksonville U.	2,576	Brevard Eng.	999
St. Leo	1,945	Biscayne	867
Florida Southern	1,787	Barry	788
Rollins	1,735	Marymount	578
U. of Tampa	1,472	Florida Mem.	552
Florida Presby.	1,393	New College	473
Stetson	1,288	Embry-Riddle Aero. In.	184
Junior Colleges			
Miami-Dade	29,920	Edison	1,953
St. Petersburg[1]	9,059	Indian River	1,695
Broward	8,937	St. John's River	1,595
Brevard	6,518	North Florida	1,509
Florida J. C. at Jacksonville[2]	5,702	Lake City and Forest Ranger	1,421
Palm Beach	4,907	Okaloosa-Walton	1,394
Pensacola	4,889	Chipola	1,312
Daytona Beach	4,204	Santa Fe[3]	1,015
Hillsborough (to be established)	4,134	Tallahassee	915
Manatee	3,390	Seminole	713
Polk	3,048	Florida Keys	618
Central Florida	2,750	South Florida[4]	350
Gulf Coast	2,021	Orange (authorized in 1961 by Legislature--not yet established)	
Lake-Sumter	2,004		

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[1] Includes Gibbs & Clearwater campuses.

[2] Formerly Duval-Nassau.

[3] Formerly Alachua-Bradford.

[4] Formerly Highlands-Hardee

in 1970 by institution.

Space and Facility Needs of Florida Junior Colleges in 1970

It is the purpose here to provide a summary of the findings and to present conclusions regarding the space needs of Florida Junior Colleges in 1970. Existing facilities have been inventoried, student station utilization in classrooms and laboratories have been analyzed, and a projection of space requirements to 1970 has been made.

The cooperating junior colleges supplied the information about existing facilities which included, among other items, data about (1) the amount of existing assignable space (2) types of construction (3) age of existing facilities (4) the number of existing classrooms and laboratories and the space in them and (5) the student station utilization of general classrooms and laboratories. Table 37 contains a summary of these data for each institution which participated in the Study.

General conclusions regarding these data are as follows:

1. The data on the amount of assignable area show that in Florida Junior Colleges approximately 65.7 per cent of the gross area is assignable and 34.3 per cent is non-assignable according to the definitions used in this Study.
2. Assignable area in classrooms averages 17.2 per cent and in laboratories, 14.0 per cent of the gross area.
3. Area assigned to library averages 10.0 per cent of the gross space.
4. The data show that 95.1 per cent of the space in Florida junior college facilities is classified as permanent construction. Institution

TABLE 37

SUMMARY OF PHYSICAL PLANT DATA-EXISTING AND PROJECTED TO 1970[1]
FLORIDA JUNIOR COLLEGES

	EXISTING					PROJECTED			
		Const. by Type		Stu. Sta. Utilization				Needed Additional	
Institution	Assign. Space Per Stud.[2]	Perm.	Temp & Makesh.	CRs	Labs	Enr. Increase[3]	Add. Assign. Space Needs	CRs	Labs
27	40.5	100.0		32.9	17.1	240	27,625	5	0
30	52.4	100.0		53.4	35.3	1001	86,680	27	7
32	64.5	91.9	8.1	27.5	39.1	4286	205,990	41	10
33	42.2	99.3	0.7	48.6	38.2	5725	322,117	83	23
34	58.3	100.0		29.2	26.3	684	57,547	1	7
35	36.3	83.1	16.9	61.6	45.6	18,839	1,878,108	265	94
36	64.5	100.0		45.3	33.6	2096	119,190	23	14
37	56.0	100.0		53.8	23.6	124	45,215	5	8
39	64.0	93.3	6.7	30.9	23.3	1319		19	4
40	48.4	100.0		37.9	17.9	1162	87,702	13	9
41	58.8	90.7	9.3	50.1	42.4	703	61,831	26	2
43	52.9	100.0		45.6	34.3	1655	116,699	15	17
44	66.0	94.6	5.4	61.2	26.1	1569	148,309	25	25
46						618	54,053	15	8
47						1394	100,358	31	7
48	52.8	100.0		54.5	41.7	1695	181,438	41	22
49	78.4	100.0		43.3	26.5			-	-
50						3048	187,384	70	12
51	37.3	100.0		51.4	53.5	- 396	89,904	19	13
52	49.9	100.0		31.2	32.1	893	64,846	4	9
53	63.6	90.3	9.7	49.0	61.3	2719	181,391	54	13
62	41.1	100.0		46.8	40.8	4110	144,780	21	9
63	130.6	100.0		31.3	16.9			-	-
70						1015	87,976	21	13
71						915	80,235	19	12
72						618	35,432	10	6
73						713	64,386	12	10
74						5702	338,381	97	29
75						4134	255,366	69	25
Total	49.6	95.1	4.9	47.0	36.2	66,581	5,022,943	1031	408

[1] Includes all junior colleges new and existing but excludes those to be combined with others. Projections for Institution Numbers 49 and 63 are included with Number 62.

[2] Data are given for existing permanent sites only but includes all space available for use.

[3] Projected data includes new and existing institutions except Orange.

Number 35 had the largest amount of temporary and makeshift construction.

5. Seventy-five per cent of all facilities located on Florida junior college campuses were constructed since 1959. Obviously, a very small amount of construction will be needed to replace obsolete facilities at junior colleges by 1970.
6. According to the data, 7.5 per cent of existing junior college facilities are to be abandoned. Also, it is likely that 90.7 per cent of existing space will be used for the same purposes that facilities are currently used.
7. Total assignable area in Florida junior colleges averaged 49.6 square feet per FTE student. The range was from 36.3 to 78.4 square feet per FTES.
8. The average size of classrooms in Florida junior colleges was 714.1 square feet. The range was 561.3 to 866.7 square feet. The amount of space per student station in classrooms varied from 13.8 to 26.6 square feet per station. The average number of square feet per student station was 19.6.
9. The average size of laboratories in use was 1034.7 square feet. The size of laboratories ranged from 641.8 square feet to 1294.6 square feet. Space per student station varied from 19.3 square feet to 51.6 square feet. The average was 37 square feet per student station.
10. Student station utilization in classrooms averaged 47 per cent. The range was from 27.5 per cent to 61.6 per cent. The base used for computing this factor was 45 hours available for scheduling each week.

11. Student station utilization in laboratories averaged 36.2 per cent. The range was from 16.9 to 61.3 per cent.
12. Florida junior colleges will need an additional 6,216,271 square feet of assignable space by 1970 in order to provide adequate academic facilities for the FTES enrollment projected for that date. The greatest need will be for classrooms and laboratories. The next largest need is for physical education space. The need for library space amounts to approximately 50 per cent of that projected for classroom and laboratory space.

Space and Facility Needs of Florida Senior Colleges and Universities in 1970

A summary of the findings of this Study and its conclusions regarding the space needs of Florida senior colleges and universities in 1970 are presented here. Inventories of existing facilities have been made, utilization of classrooms and laboratories have been analyzed and space needs of the senior colleges and universities by 1970 have been projected.

Data regarding the foregoing factors were supplied by the cooperating institutions. A total of 20 institutions participated in the Study. The participating institutions provided data regarding:

1. the amount of existing assignable space
2. types of construction
3. age of existing facilities
4. the number of existing classrooms and laboratories
5. the student station utilization of general classrooms and laboratories.

Table 38 contains a summary of selected pertinent data for each institution which participated in this study.

TABLE 38

SUMMARY OF PHYSICAL PLANT DATA-EXISTING AND PROJECTED TO 1970 FLORIDA SENIOR COLLEGES AND UNIVERSITIES

	EXISTING					PROJECTED			
		Const. by Type		Stu. Sta. Utilization				Additional Needed	
Institution	Assign. Space Per Stud.	Perm.	Temp. & Makesh.	CRs	Labs	Enr. Increase	Add. Assign. Space Needs	CRs	Labs
1	105.4	91.7	8.3	31.5	15.6	285	74,113	0	18
2	199.6	100.0		32.4	24.3	3287	226,540	86	2
3	67.0	98.6	1.4	45.7	32.3	- 692	208,107	57	5
4	98.2	91.4	8.6	39.5	34.6	- 170	320,281	0	21
5	78.1	100.0		48.4	28.3	4650	286,520	76	2
10	91.2	100.0		31.4	24.8	125	36,353	6	2
11	39.7	100.0		24.9	27.8	327	49,837	0	5
12	91.4	100.0		26.9	20.0	607	39,258	7	2
13	35.7	100.0		37.1	29.7	531	54,107	13	3
14	49.5	41.0	59.0	29.4	9.1	4	9,828	0	0
15	61.1	85.4	14.6	33.0	29.7	125	23,588	5	4
16	131.2	99.7	.3	29.2	20.0	621	16,438	0	4
17	69.7	95.3	4.7	18.2	12.2	112	59,666	0	0
18	60.5	96.2	3.8	41.3	24.4	592	74,410	29	0
19	157.4	89.2	9.9	20.4	15.8	302	43,015	15	11
20	94.9	74.2	25.8	27.9	15.4	327	53,402	11	4
21	55.1	85.6	14.4	29.9	28.1	1055	79,006	15	2
22	117.1	85.3	14.7	6.8	6.8	- 199	15,594	0	5
23	83.7	90.1	9.9	40.9	26.8	- 356	186,729	21	18
24	61.1	96.9	3.1	36.6	29.2	- 318	22,744	1	0
Total	86.1	93.8	6.2	36.8	24.9	11,215	1,879,536	335	108

The following is a summary of the findings and conclusions of this study:

1. The findings show that an average of 59.7 per cent of the gross area in Florida senior colleges and universities is assignable and 40.3 per cent is non-assignable.
2. Assignable area in classrooms averaged 10.9 per cent while the area in laboratories averaged 9 per cent.
3. Area assigned to library averaged 8.3 per cent of the gross area.
4. The data show that 93.8 per cent of the outside gross space in Florida senior colleges and universities is classified as permanent construction. Institution Number 14 had the largest amount of temporary and makeshift construction.
5. Three-fourths of the facilities existing at Florida senior colleges and universities were constructed since 1940.
6. The data show that only 3.1 per cent of all existing facilities are to be abandoned. Also 94.4 per cent of existing facilities are to be continued in use for the same purposes as used at the time the survey was made.
7. Assignable area in Florida senior colleges and universities averaged 86.1 square feet per FTE student. The range was from 35.7 to 199.6 square feet per FTES.
8. The average size of classrooms in Florida senior colleges and universities was 669 square feet. The range in size was from 318 to 999 square feet. The amount of space per student station averaged 15.4 square feet. The range in amount of space per student station was 10.5 to 24.9.

9. The average size of laboratories was found to be 971.4 square feet with a variation from 588.3 to 1310 square feet. Space per student station varied from 21.4 to 79.4 square feet. The average number of square feet per student station was 36.54 square feet.
10. Classroom student station utilization averaged 36.8 per cent based on 45 hours available for scheduling during the week. The range was from 6.8 to 48.4 per cent.
11. Laboratory student station utilization averaged 24.7 per cent based on 45 hours available for scheduling during the week. The range was from 6.8 to 34.6 per cent.
12. The senior colleges and universities in Florida will need an additional 1,879,536 square feet of assignable floor space in academic undergraduate facilities in order to provide for the projected FTES by 1970. The greatest needs are for classrooms and laboratories, other teaching facilities and library space.

APPENDIX A

ACE THE ASSOCIATED CONSULTANTS IN EDUCATION

Educational Planning Consultants

C. W. McGuffey, Executive Director. 112 W. Pensacola St., Tallahassee, Florida, Phone: 305-224-4821

September 24, 1965

Re: Survey of Higher Education Facilities

Dear

Enclosed are the forms and instructions designed to gather information for the "Survey of Higher Education Facilities" authorized by the State Commission for the Higher Education Facilities Act of 1963. Two sets of the instructions and three copies of the data gathering forms are included. Please return one completed typed copy of the forms to this office by October 25, 1965. You may wish to retain one copy of the forms for your use.

Because the instructions are long and somewhat involved, may we encourage you to give careful study to them before proceeding to complete the forms. Due to the fact that the data are to be machine processed, extreme care has been taken to explain and illustrate the way in which the forms are to be completed. May we ask your cooperation to follow the instructions as carefully as possible.

Please note also that the definitions used, with but few exceptions are those defined in the laws and regulations of the Higher Education Facilities Act. We delayed sending these forms to you - expecting to receive copies of the law and regulations from the U. S. Office of Education so that these could be a part of our mailing. Unfortunately, these have not arrived and could not be mailed at this time. However, copies will be sent to you as soon as they are received by this office.

Our office had no way of estimating your need for forms, therefore, we anticipate that you will duplicate the number of forms that you need for your institution. Please exercise great care in the reproduction of forms to include all requested data and to reproduce an exact duplication of the copy you receive.

Branch Offices: 4511 Edgemont Dr., Austin, Texas - P.O. Box 729, Meridian, Mississippi - 5628 Massachusetts Ave., Washington, D.C.

The forms, instructions, and definitions were reviewed by a committee of persons representing your institutions. Their suggestions have been followed insofar as possible; therefore, we are reasonably confident that the forms will do the job we expect them to do. Should there be questions concerning the forms or the instructions, please get in touch with us. If there is doubt as to whether the instructions are understood, complete a copy of the form in question and send it to us with your questions.

We would like to stress that we are performing this study on a time schedule; therefore, your cooperation and assistance in completing and returning the forms will be sincerely appreciated.

Sincerely yours,

CWMcGuffey

C. W. McGuffey
Executive Director

CWM/akl

FLORIDA STUDY
OF
HIGHER EDUCATION FACILITIES

Instructions for the Completion of Data Forms

I. General

A. Please read instructions carefully before completing the data forms. Each form should be completed in its entirety. Please mark all blanks that are applicable to your institution.

B. All data forms should be returned to the ACE office at one time. Data, for the most part, are to be machine processed; therefore, it is necessary that all data forms dealing with an institution be avail- for processing at the same time.

C. Considerable care should be exercised in completing data forms to insure completeness and accuracy. The final results can be only as valid as the data used.

D. Complete a separate set of forms on each institution and each branch campus.

E. Review the Law and Regulations pertaining to the Higher Education Facilities Act of 1963, before completing forms.

F. Complete forms only on buildings which are in existence or buildings for which contracts have been let.

II. Definition of Terms

For the most part, definitions are the same as those included in OE-51008, "Financial Assistance for Construction of Higher Education Facilities", Regulations of the Higher Education Facilities Act of 1963. Expanded definitions are also included in the regulations pertaining to the Higher Education Facilities Act of 1963. Definitions of terms used are as follows:

1. Academic Facilities - structures suitable for use as classrooms, laboratories, libraries, and related facilities necessary or appropriate for instruction of students or for research, or for administration of the educational or research programs, of an institution of higher education, and maintenance, storage, or utility facilities essential to operation of the foregoing facilities.

2. Instructional and Library Facilities - all rooms or groups of rooms used regularly for instruction of students, for faculty offices, or for library purposes.

3. General Classrooms - rooms, regardless of size, used chiefly for lectures, recitation, and regularly scheduled seminar type of class meetings. A room should be classified as a general classroom if it is designated for lecture and recitation type meetings and if its equipment does not render it unsuitable for use by classes in almost any subject.

4. Teaching Laboratories or Shops - rooms designed and equipped for a specialized type of instructional activity. The special design and equipment will usually render this space unsuitable for use by classes in other disciplines. A teaching laboratory should be distinguished from a research lab in that the teaching lab should be available for regularly scheduled laboratory classes.

5. Other Teaching Facilities - all other rooms and areas regularly used or intended for scheduled class meetings or individual instruction such as music rehearsal rooms and music studios, playing floors, wrestling and boxing rooms, indoor swimming pools, and indoor track and field areas used regularly for instructional purposes.

6. Service Areas for Teaching Facilities - all service areas which adjoin and are used in conjunction with any general classroom, instructional laboratories or shops, or other teaching facilities.

7. Library Facilities - rooms or groups of rooms used for the collection, storage, circulation, and use of books, periodicals, manuscripts, and other reading and reference materials, including the general library, departmental libraries and rooms for special collections of books, periodicals, documents and other library materials, rooms for stor-

age of films, records, and other audio-visual equipment and materials, library reading and listening rooms, acquisition room, cataloging room, document, reproduction room, circulation and reference desks, and any other similar library facilities.

8. Faculty Offices - all rooms or groups of rooms with office-type equipment, which are assigned to one or more faculty members for the performance of administrative, clerical, or faculty duties other than meeting classes. Service areas should be counted together with the offices themselves.

9. Instruction-Related Facilities - all rooms or areas used for purposes related to the instruction of students, or for research, or for administration of the educational or research programs of an institution of higher education. Instruction-related facilities includes only rooms and areas which are assignable for research, or administrative purposes or for functions related to instruction of students, and rooms or areas which directly support such purposes.

10. Research Facilities - rooms or groups of rooms which provide research facilities and are not made available for regular class meetings.

11. Administrative Facilities - all rooms or groups of rooms with office-type equipment, other than those meeting the definition of "faculty offices", which are used for the performance of administrative or clerical duties related to the administration of the educational or research programs of an institution of higher education.

12. Student Study Facilities - all rooms or areas used as student study rooms, including adjoining toilet or locker facilities.

13. Other Instruction-Related Facilities - all types of rooms or facilities not included in one of the above categories, which clearly are related to the instructional or research programs of an institution of higher education.

14. Related Supporting Facilities - all other areas and facilities necessary for the utilization, maintenance, and operation of academic facilities, including building service areas and circulation areas.

15. Branch Campus - a campus of an institution of higher education which is located in a community different

from that in which its parent institution is located.

16. Full-time Equivalent Number of Students - the full-time equivalent number of students shall be determined by dividing the total number of credit hours by the normal load of a full-time student in the institution. For the purpose of this study, the normal load of a full-time student shall be considered 15 semester hours. Institutions should report enrollments existing approximately two weeks after the beginning of the Fall term, or after the Fall "Drop and Add" deadline.

17. Gross Space - total square feet of space in the building measured outside wall to outside wall at each floor level.

18. Interior Space Area - the total area measured between the principal wall faces at or near floor level, plus wall case or alcove spaces, or both, opening into and designed to serve the activity carried on in the area.

19. Assignable Area - square feet of area in facilities designed and available for assignment to specific functional purposes as distinguished from area in a building used either for janitorial and building maintenance services or for non-assigned use.

20. Permanent Buildings - those designed for a particular site and constructed of brick, concrete block, CBS exterior or other long-life materials. As a general rule, buildings of wood exterior are excluded. Building life expectancy is estimated to extend well beyond the five-year projection period.

21. Temporary Buildings - those planned and constructed for short term use; or those which, because of unserviceable condition, future use will be limited to a short term; i.e., five years or less. Such buildings may be of wood frame construction or other materials of less durable quality than masonry. A building of this type may be characterized further by plans to discontinue its use at the earliest opportunity.

22. Portable Buildings - those designed and constructed to be easily moved, either as a unit or by disassembly of component parts.

23. Actual Student Stations - the number of student chairs, desks, or work stations in the room or rooms reported.

24. Makeshift Instructional Space - a space temporarily used for regularly scheduled class activities but not designed or equipped for instructional use. For example, an instructor's office, a church, storage room, converted residence or space not owned by the institution.

25. Inactive Room -- new - any room that is not in current use of any kind and is housed in a new or unfinished building.

III. INSTITUTIONAL ENROLLMENT FORM

A. The purpose of this form is to provide information needed to project institutional enrollment for the period 1966-1970.

B. Complete the form as follows:

Item 1. "Freshmen" is used to designate the beginning class in the institution. Institutions which enroll neither freshmen nor sophomores should complete Item 1 with the first-time junior enrollments, which is their beginning class.

Item 2. Make a check, (✓), in either Item a or b for each of the four categories. If b is checked, give a short explanation in the blank provided. Further explanation may be given on the back of the form, if necessary.

Item 3. Make a check, (✓), in either Item a or b. If b is checked, fill in the blank space indicating the enrollment.

Item 4. Note that the enrollment information sought is for actual, countable, individual students (Headcount).

Item 5. Note that the enrollment information sought is for full-time equivalent students. "Full-time equivalent students" are defined in the section entitled Definition of Terms.

Item 6. It would be helpful, for the purpose of this study, to have the institution's estimate of enrollment for 1970. Note that this is also in terms of "full-time equivalent students". If your institution has estimated your 1970 enrollment, complete Item 6. If your institution has not estimated its 1970 enrollment, you may leave this blank.

IV. BUILDING INVENTORY FORM

A. This form is designed to report all buildings owned or used by the institution or by its auxiliary agencies. Residential type buildings such as dormitories, married student housing, faculty housing, and similar type buildings are to be excluded, unless academic facilities are a part of the facility. Generally, the type buildings to be included are classroom, laboratory, physical education, administration, library, student center, auditorium, and maintenance buildings. Report all buildings in existence and those for which contracts have been let.

B. Complete the form as follows:

1. Building Name. Report the official name of the building.

2. Building Number. Report the official building number. If there is no official building number, assign each building a number. In any case, the building number should be four digits in length. For any building number with less than four digits, add zeros to the beginning of the number to equal four digits. For example, Building 86 would be coded "0086".

3. Principal Use. Indicate the major function of the building by entering the appropriate code number from the following list:

Code	Function
1	Classroom Building
2	Library Building
3	Administration Building
4	Student Center Building
5	Auditorium Building
6	Physical Education Building

Code	Function
7	Research Building
8	Maintenance Building
9	Other

4. Gross Space. Enter total square feet of space in the building measured outside wall at each floor level. In any case, this number should be six digits in length. Add zeros to the beginning to equal six digits. For example, 9408 would be coded "009408".

5. Date of Construction. Enter date of completion of major portion of the building.

6. Classification of Construction. Enter in the blank space the code number that corresponds to the condition which most nearly describes the building:

Code	Classification
1	Permanent
2	Temporary
3	Portable

7. Future Disposition. Indicate the anticipated future disposition of the building by placing one of the following codes in the blank space provided:

Code	Future Use
1	No Change
2	Abandon and replace
3	Abandon and not replace
4	Rehabilitate
5	Convert to other use

8. Ownership. Indicate by placing the appropriate numerical code in the blank space provided:

Code	Ownership	
1	Institution	(Building is owned by the institution, its controlling board or corporation.)

Code	Ownership	
2	Other	(Building is not owned by the institution, its controlling board or corporation. The building might, for example, be made available for use by a church, business or individual.)

Distribution of Assignable Area

Items 9. through 22. Use definitions included with this set of instructions.

Note: As the information on this form will be machine processed, please use the following procedure for completing this part of the Building Form:

No. of Rooms - Always use a 3 digit number for this column. For example, 7 rooms would be reported "007", 15 rooms would be reported "015", etc.

No. of Student Stations - Always use a 4 digit number for this column. For example, 9 student stations would be reported "0009", 25 would be reported "0025", etc.

Square Feet of Assignable Area - Always use a 6 digit number for this column. For example, 2250 square feet would be coded "002250", 15860 square feet would be coded "015860", etc.

V. RECORD OF USE OF INDIVIDUAL INSTRUCTIONAL ROOMS FORM

A. The purpose of this form is to provide information needed to:

1. Inventory the institution's instructional spaces

2. Analyze the enrollment in the institution's curriculum.

3. Analyze the use of the institution's classrooms and teaching laboratories

B. Complete the form as follows:

1. Fill in the blanks at the top of the page. "Assignable Floor Area" and "Actual Student Stations" are defined in the section entitled Definition of Terms. In any case, the building number should be four digits in length. For example, Building 46 would be reported as "0046". Assignable Floor Area should be reported with six digits. For example, 800 square feet would be reported as "000800". Actual Student Stations should be reported with four digits. For example, 25 student stations would be reported as "0025".

2. Building Construction. Make a check, ( ), in either Item 1, 2, or 3. "Permanent". "Temporary", and "Portable" are defined in the section entitled Definition of Terms.

3. Room Construction. Make a check ( ), in either Item 1, 2, or 3. "Permanent", "Temporary" and "Makeshift" are defined in the section entitled Definition of Terms. Room construction and building construction are analyzed separately since in some instances temporary rooms have been built within permanent buildings or a temporary section has been added to a permanent building.

4. Type of Room. Make a check, ( ), in either Item 10 , 12, 14, 18, 19, 21, 23, 89, or 90. The terms "General Classroom", "Teaching Auditorium","Teaching Laboratory", "Inactive Room -- new", etc. are defined in the section entitled Definition of Terms.

5. Courses Taught and Number of Students Each Day.

   a. "Course" refers to the institution's letter code for the particular course. Use the same letter code for this form as listed in the institution's catalog. In any case, however, the code should be four letters in length. For those courses which are coded normally with less than four letters, add the letter "X" to the end of the letter series; i.e., BIOX

   b. "No:" refers to the institution's number code for the particular course. Institutions should use the same number code for this form as listed in the institution's catalog. In any case, however, the number code will be three numbers and one letter in length. All lecture class sections should end with the letter "C". All laboratory class sections should end with the letter "L".

c. "Student Sta/Per" or Student Station Periods represents the equivalent number of students enrolled for this course, at this hour, on this day, and in this room, in terms of one hour. In any case, however, the number of student station periods should be three numbers in length. For example, 150 student stations periods would be coded "150", 33 student station periods would be coded "033" and 8 student stations periods would be coded "008". The following should further explain student station periods.

d. "Hour of the Day". This form assumes that class meetings begin and end near or on the hour. This will not be the case with some institutions and these institutions should use the following procedure for completing the form:

   (1) A class of 20 students that meets on Monday from 9:00 a.m. to 11:00 a.m. should be reported once as 20 student station periods in the cell for Monday, 9-10 a.m. and once again as 20 student station periods in the cell for Monday, 10-11 a.m.

   (2) A class of 20 students that meets for an hour and a half on Tuesday from 9:00 a.m. to 10:30 a.m. (or 10:20) should be reported as 30 student station periods (1½ X 20) in the cell for Tuesday, 9-10 a.m. Note that the figure 30 is inserted in the cell 9-10, which is the cell which most nearly represents the actual class meeting time. In other words, most of the class period 9:00 to 10:30 falls between 9 and 10. This method, in effect, reduces the time spent in class as far as the form is concerned, but increases the number of students proportionally thus giving an accurate figure for student station periods.

e. In the event that two or more courses are being taught simultaneously in the same room, report the course which accounts for the largest number of students. Report the total combined enrollment of the two (or more) separate courses. An example is provided on the following page.

Example

Hour of the Day	MONDAY		TUESDAY	
	Course No:	Students:	Course No:	Students
7-8 a.m.				
8-9				
9-10	BIOX 101C	020		
10-11			PHYS 201L	010
11-12			PHYS 201L	010
12-1 p.m.				
1-2			ENGL 120C	030
2-3				
3-4	ARTX 103C	013		
4-5				
5-6				
6-7				

A biology class of 20 students that meets on Monday from 9:00 a.m. to 10:00 a.m.

A physics lab of 10 students that meets on Tuesday from 10:00 a.m. to 12:00 a.m.

An English class of 20 students that meets on Tuesday from 1:00 p.m. to 2:30 p.m.

An Art class of 5 students (Art 101) and an Art class of 8 students (Art 103) meet on Monday from 3:00 p.m. to 4:00 p.m.

(3) Note: Do not fill in cells for days or hours during which no class meets.

Example

Hour of the Day	MONDAY		TUESDAY	
	Course No:	Students:	Course No:	Students
7-8 a.m.				
8-9				
9-10	BIOX 101C	020		
10-11			PHYS 201L	010
11-12			PHYS 201L	010
12-1 p.m.				
1-2			ENGL 120C	030
2-3				
3-4	ARTX 103C	013		
4-5				
5-6				
6-7				

A biology class of 20 students that meets on Monday from 9:00 a.m. to 10:00 a.m.

A physics lab of 10 students that meets on Tuesday from 10:00 a.m. to 12:00 a.m.

An English class of 20 students that meets on Tuesday from 1:00 p.m. to 2:30 p.m.

An Art class of 5 students (Art 101) and an Art class of 8 students (Art 103) meet on Monday from 3:00 p.m. to 4:00 p.m.

(3) Note: Do not fill in cells for days or hours during which no class meets.

VI LIBRARY FACILITIES INVENTORY FORM

A. The purpose of this form is to provide the basis for a quantitative analysis of the facilities available for library purposes.

B. A form should be completed on each building which houses any facilities for general library purposes on the campus including both central and decentralized library service units. It does not include private libraries of professional personnel, or collections for recreational reading in housing units. Forms should not be completed on facilities which are used exclusively for:

1 - Law Library

2 - Medical Library

3 - Theological Library

C. Complete the form as follows:

1. Institution. Fill in name of institution.

2. Building Number. Enter official building number. If no official building number exists, assign each building a number.

3. Completed by. Insert name of person completing form.

4. Building Construction: Enter a check mark (✓) in the space that most nearly describes the construction of the building being reported.

5. Major Function. Describe the types of spaces usually found in libraries. If a space is not listed on the form, tabulate under "Other", Classrooms and teaching laboratories regularly scheduled for classes should be listed on ACE Form III.

6. No. of Rooms. Enter the number of rooms according to functions listed. Count a room only once. If a room is designed and used for more than one purpose, enter under Multi-use and indicate functions on back of form. Normally such a room should be listed under the area which describes its primary function.

7. Assignable Area. Enter the number of square feet of assignable area.

8. Number of Stations - Regular. Enter the number of seats, chairs, or work stations regularly available for student use.

9. Number of stations - Carrels. Enter the number of study or work carrels that are regularly assigned for student use.

10. Number of Volumes. This is the total number of any printed, typewritten, mimeographed, or processed work, bound or unbound, that has been cataloged or fully prepared for use. Microcards, microfilms, microprints, and other forms of microtext are included.

11. Lineal Feet of Bookshelving. Enter the number of lineal feet of shelving space devoted to books in areas listed on the form. One lineal foot of shelf space is defined as one foot on a single shelf.

12. Periodicals: Number subscribed to. This is the number of periodicals subscribed to. Count each distinct periodical only once whether there is a multiple subscription or not. A periodical is a publication appearing at regular intervals of less than a year and continuing to appear for an indefinite period.

13. Lineal Feet of Periodical Shelving. Enter number of lineal feet of shelving space devoted to the shelving of periodicals in the areas listed. A periodical generally has a distinctive title and the successive numbers are intended to appear at regular intervals of less than a year and continuing to appear for an indefinite period.

VII. Inventory of Instructional Space by Capacity of Room

A. The purpose of this form is to produce an accurate count of instructional spaces by capacity of room and by room type.

B. Complete the form as follows:

1. Institution. Fill in name of institution.

2. Completed by. Insert name of person completing form.

3. Date. Insert date.

4. Extra Sheets. Add extra sheets as required.

C. General classrooms. In the various cells representing classroom size (Numbers 1-9, 10-19, etc. represent actual student stations) fill in the correct number of general classrooms. All existing general classrooms and all general classrooms for which contracts have been let are to be included. Do not report any temporary or makeshift spaces on this form.

D. Teaching Auditoriums. Follow the same procedure as General Classrooms.

E. Music Studios. Follow same procedure as General Classrooms.

F. Music Practice Rooms. Follow same procedure as General Classrooms.

G. Teaching Laboratories. Report all existing teaching laboratories and all those for which contracts have been let. The same basic procedure should be used for reporting teaching laboratories as general classrooms except that laboratories should be grouped by type. For example, all chemistry laboratories should be reported on one line, all biology laboratories on another, etc. Designate the type laboratory being reported on each line by inserting in the extra space provided for teaching laboratories, the institution's letter code for the particular type course. Use the same letter code for this form as listed in the institution's catalog. In any case, however, the code should be four letters in length. For those courses which are coded normally with less than four letters, add the letter "X" to the end of the letter series; i.e., BIOX. Thus, if an institution's letter code for chemistry is "CY, the line used to report chemistry laboratories would be designated "CYXX". Where a laboratory is used by more than one department, complete the form as follows: For example, if a drawing laboratory with 15 student stations is used by the Engineering Department for a course in Engineering drafting (ENG 202) and if it is also used by the Architecture Department for a course in Architectural drafting (AE 101), this lab should be reported in the following manner:

Music Practice					
Teaching Laboratories					
	ENGX				
	AEXX		1		

As in the case of general classrooms, teaching, auditoriums, music studios, and music practice rooms, report all existing spaces and those for which contracts have been let. Do not report any temporary or makeshift spaces. Report only spaces which can be satisfactorily used through 1970. Report only spaces which are owned by the institution. its controlling board or corporation.

3

ACE - Form I

INSTITUTIONAL ENROLLMENT FORM

Higher Education Facilities Study

Institution:____

Completed By:________________________________Date________________

1. List First-time Freshmen Enrollments Only.

	Fall 1960	Fall 1961	Fall 1962	Fall 1963	Fall 1964	Fall 1965
Florida Residents						
Out-of-State						
Foreign Students						
Total						

2. If you have reason to believe that enrollments in the above categories will continue to increase or decrease at something like the present rate, indicate below. If you have reason to believe that enrollments for any of the categories will change significantly, indicate this and explain why.

Florida Residents: a. Present rate ( )
b. Significant change in rate ( ) If so, why?__________________

____

Out-of-State: a. Present rate ( )
b. Significant change in rate ( ) If so, why?__________________

____

Foreign Students: a. Present rate ( )
b. Significant change in rate ( ) If so, why?__________________

____

Total First-Time: a. Present rate ( )
b. Significant change in rate ( ) If so, why?__________________

____

3. Does your institution plan to limit its total enrollment to a set maximum now or in the near future?

( ) a. No.
( ) b. Yes. We plan to limit enrollments to ________________.
Number

(Specify whether this number represents full-time students, full-time equivalent students, or another classification.)

4. Institutional Enrollments (Headcount)

	Fall 1960	Fall 1961	Fall 1962	Fall 1963	Fall 1964	Fall 1965
Freshman Class						
Sophomore Class						
Junior Class						
Senior Class						
Graduate Students						
Special Students						
Total Enrollments						

5. Institutional Enrollments (Full-time Equivalent Students)

	Fall 1960	Fall 1961	Fall 1962	Fall 1963	Fall 1964	Fall 1965
Freshman Class						
Sophomore Class						
Junior Class						
Senior Class						
Graduate Students						
Special Students						
Total Enrollment						

6. What is your estimate of your institution's enrollment for 1970 in Full-Time Equivalent Students? ____________

BUILDING INVENTORY

ACE Form II

Higher Education Facilities Study

Institution______________________________

Completed by______________________________ Date____________

1. Building Name:________________
2. Building Number:__________
3. Principal Use:________________
4. Gross Space:____________
5. Date of Construction:__________
6. Classification of Construction:______________
7. Future Disposition:____________
8. Ownership________________

DISTRIBUTION OF ASSIGNABLE AREA:

	No. of Rooms	No. of Stu. Sta.	Square Ft. of Assignable Area
09. General Classrooms			
10. Instructional Labs. & Shops			
11. Other Teaching Facilities			
12. Service Areas for Teaching Facilities			
13. Library Facilities (1)			
14. Faculty Offices			
15. Total Instructional and Library Facilities (Sum of Lines 9-14)			
16. Research Facilities			
17. Administrative Facilities			
18. Student Study Facilities			
19. Other Instruction Related Facilities			
20. Total Instruction Related Facilities (Sum of Lines 16-19)			
21. Sum of Line 15 and 20 - Ttl.			
22. Related Supporting Facilities			

(1) Include only those general library facilities that are located in buildings other than the central library facility.

ACE Form III

RECORD OF USE OF INDIVIDUAL INSTRUCTIONAL ROOMS

Institution____________________________

Building No.________Room No.___________

Assignable Floor Area (Sq. Ft.)________

Building Construction: ( ) 1. Permanent
( ) 2. Temporary
( ) 3. Portable

Completed by____________________________

Title______________________________________

Actual Student Stations__________________

Room Construction: ( ) 1. Permanent
( ) 2. Temporary
( ) 3. Makeshift

	Courses Taught and Number of Students Each Period Each Day								
Hour of The Day	MONDAY		TUESDAY		WEDNESDAY		THURSDAY		
	Course: No:	Students Sta/Per	Course: No:	Students Sta/Per	Course: No:	Students Sta/Per	Course: No:	Students Sta/Per	Co No
7-8 a.m. (01)									
8-9 a.m. (02)									
9-10 a.m. (03)									
10-11 a.m. (04)									
11-12 a.m. (05)									
12-1 p.m. (06)									
1-2 p.m. (07)									
2-3 p.m. (08)									
3-4 p.m. (09)									
4-5 p.m. (10)									
5-6 p.m. (11)									
6-7 p.m. (12)									
7-8 p.m. (13)									
8-9 p.m. (14)									
9-10 p.m. (15)									

D OF USE OF INDIVIDUAL INSTRUCTIONAL ROOMS

Completed by____________________________

Title___________________________________

Actual Student Stations_________________

Room Construction: ( ) 1. Permanent
( ) 2. Temporary
( ) 3. Makeshift

Type of Room:
( ) 10 General Classroom
( ) 12 Teaching Laboratory
( ) 14 Teaching Auditorium
( ) 18 Music Studio
( ) 19 Music Practice Room
( ) 21 Gym Playing Floor
( ) 23 Indoor Swimming Pool
( ) 89 Inactive Room -- new
( ) 90 Other

ber of Students Each Period Each Day										
UESDAY	WEDNESDAY		THURSDAY		FRIDAY		SATURDAY			
Students Sta/Per	Course: No:	Students Sta/Per	Course: No:	Students Sta/Per	Course: No:	Students Sta/Per	Course: No:	Students Sta/Per		

IMPORTANT - One form should be completed for every room or space where at least one class is regularly scheduled, regardless of the condition or location of the space or room. Exclude outdoor areas.

ACE Form IV

LIBRARY FACILITIES INVENTORY

Higher Education Facilities Study

1. Institution______________________________ Date______________

2. Building Number______________ 3. Completed by______________________

4. Building Construction: ( ) Permanent ( ) Temporary ( ) Portable

5. Major Function	(6) Number of Rms.	(7) Assignable Area	(8) Number of Regular Sta.	(9) Number of Carrels	Books		Periodicals	
					(10) Number of Volumes	(11) Lineal Ft. of Shelving	(12) Number Subscribed to	(13) Lineal Ft. of Shelving
Reading					Total Only		Total Only	
Reference								
Reserve Reading								
Listening								
Group Study								
Preview								
Recording								
Periodicals								
Graphic Prep. & Reprod.								
Stack Areas								
Work & Preparation								
Microfilm Viewing								
Multi-Use (1)								
Storage								
Offices								
Staff								
Television Studio								
Other								
TOTAL								

(1) Indicate nature of multi-use on back of sheet

ACE - Form V

INVENTORY OF INSTRUCTIONAL SPACE BY CAPACITY OF ROOM

Higher Education Facilities Study

Institution________________________Completed by______________________Date_______

Type of Instructional Space	Number of Spaces									
	1-9	10-19	20-29	30-39	40-49	50-59	60-79	80-99	100-+	Total
General Classroom										
Teaching Auditorium										
Music Studio										
Music Practice										
Teaching Laboratories										

ACE - Form V
(Continued)

		Number of Spaces									
		1-9	10-19	20-29	30-39	40-49	50-59	60-79	80-99	100- +	Total
Teaching Laboratories (Continued)											

APPENDIX B

APPENDIX B

PROCEDURES USED TO PROJECT SPACE NEEDS
Florida Colleges and Universities

The following factors were used to project space needs for the Florida junior and senior colleges and universities.

A. Additional Classrooms needed were derived by projecting the 1970 classroom needs of each course taught by the institution and subtracting from this number, the classroom facilities which the institution indicated would be available for use by 1970 on ACE Form V. Available classrooms were divided into 5 groups according to the student stations in each as follows:

1. 20 stations or less
2. 21-40 stations
3. 41-60 stations
4. 61-100 stations
5. 100-200 stations

The projected classroom needs were divided into 5 corresponding groups. The available classrooms were subtracted from those in each group, thus arriving at the need for additional classrooms of each size.

B. Additional Teaching Labs Needed were derived by much the same method as for classrooms. The method differed basically in two ways:

1. Because of the specialized nature of a teaching laboratory, shared use by more than one discipline was considered impractical and therefore projected needs were calculated not only by course, but by individual discipline area.
2. All projected laboratory needs were based on an average size of 1600 square feet per teaching laboratory.

C. Other teaching facilities

1. Senior colleges and universities--space was calculated by multiplying 5 per cent of the student contact hours by 16 square feet. This is based on the assumption that 5 per cent of all student contact hours in instruction will be in areas other than classrooms, laboratories, or library space.
2. Junior colleges--space was calculated for physical education by using a variable factor based on the size of the institution. (See G below.)

D. Faculty Office Space

1. Senior colleges and universities--factors were arrived at by dividing the 1970 projected student hours for lower, upper and graduate divisions by the recommended state figures for the number of student hours needed to "generate" one faculty member. This figure was then multiplied by the derived state norm for needed square feet of office space per faculty member.
2. Junior colleges--factors were arrived at using Minimum Foundation Program recommendations for faculty at Florida Community Junior Colleges

E. Library

1. Senior colleges and universities
   a. Reading rooms. The factor of 4.25 is based on the need to provide seating space for 25 per cent of the student body. Assuming that 18 square feet of assignable area are required for one seating space, the factor 4.25 was derived.
2. Junior colleges
   a. Reading rooms. The factor of 6.25 is based on the need to provide seating space for 25 per cent of the student body.

Assuming that 25 square feet of assignable area are required for one seating space, the factor 6.25 was derived.

b. Carrels. Carrel space was provided for one of every 12 students who are to be accommodated in the library. As seating space is to be provided for 25 per cent of the student body, carrel space was provided for 2 per cent of the student body. Twenty square feet was considered adequate per carrel.

c. Library Service. Floor space for library services is based on the generally recognized need for library service space equal to one-third of the total space required for reading rooms and carrels.

d. Stack Space. The factor .10 is based on the need for one square foot of stack space for each 10 volumes in the library.

F. Service Areas for Teaching Facilities. Floor space for service areas were estimated to require 12 per cent of the total assignable space for classroom and laboratories.

G. Other Teaching Facilities

1. Junior colleges--the factor 2.00 assumes that 2 square feet of floor space per full-time-equivalent student will be necessary for other teaching facilities.
2. Senior colleges and universities--other teaching facilities and indoor physical education needs were included under item C, previously described.

H. Administrative Facilities

1. Junior colleges--space was provided for administration according to the Minimum Foundation Program recommendations of one administra-

tor for every 8 faculty members and one student personnel worker for every 20 faculty members, plus a president. Projections were based on 290 square feet of space per administrator.

2. Senior colleges and universities--eight square feet of floor space per full-time-equivalent student was provided for administrative facilities.

I. Other Instruction Related

1. Junior Colleges--Two square feet of floor space per full-time-equivalent student was provided for other instruction related facilities.
2. Senior colleges and universities--six square feet of floor space per full-time-equivalent student was provided for other instruction related facilities.

J. Total Gross Space Needs

1. Junior colleges--total gross space needed was calculated to be the total of the assignable space times 1.52. This factor was derived from the present ratio of net to gross in Florida junior colleges.
2. Senior colleges and universities--total gross space needed was calculated to be the total of the assignable space times 1.50. This factor was derived from the present ratio of net to gross in Florida senior colleges and universities.

ACE FORM VII

I. HOURS/WEEK 1965____________

II. HOURS/WEEK 1970____________

FLORIDA STUDY OF HIGHER EDUCATION FACILITIES
COMPUTATION OF SPACE NEEDS FOR THE YEAR 1970
SENIOR COLLEGES AND UNIVERSITIES

A. ADDITIONAL CLASSROOMS NEEDED	20/400 Sq. Ft.	40/720 Sq. Ft.	60/1200 Sq. Ft.
B. ADDITIONAL TEACHING LABS NEEDED	1600 Sq. Ft.		

1965 DATA		Space Factor	Needed Space 1965	Projection Ratio to 1970
C. OTHER TEACHING FACILITIES 5% of Item I Above		16.00		Item V
D. FACULTY OFFICE SPACE (total)				Item V
1. Lower Division		.43		
2. Upper Division		.68		
3. Graduate Division		1.25		
E. LIBRARY (Main) 1. Reading Rooms		4.25		
2. Carrels For 2% of FTE Students		20.00		
3. Library Service 1/3 of Lines 1 & 2				
4. Stack Space Volumes:		.10		
SUB-TOTAL MAIN LIBRARY				
BRANCH LIBRARY FACILITIES				
GRAND TOTAL LIBRARY				Item V
F. SERVICE AREAS FOR TEACHING FACILITIES Total A + B:		.12		Item V
TOTAL LIBRARY & INSTRUCTION				

RIDA STUDY OF HIGHER EDUCATION FACILITIES
PUTATION OF SPACE NEEDS FOR THE YEAR 1970
SENIOR COLLEGES AND UNIVERSITIES

INSTITUTION # ____________
III. F.T.E. 1965____________
IV. F.T.E. 1970____________
V. PROJECTION RATIO

00 Sq. Ft.	40/720 Sq. Ft.	60/1200 Sq. Ft.	100/1600 Sq. Ft.	200/2000 Sq. Ft.

00 Sq. Ft.

		Deficit for 1970 sq.ft.
A.	CLASSROOMS	
B.	TEACHING LABS	

	Space Factor	Needed Space 1965	Projection Ratio to 1970	1970 Space Calculation	Current Space Available	
	16.00		Item V			
			Item V			
	.43					
	.68					
	1.25					
	4.25					
	20.00					
	.10					
			Item V			
	.12		Item V			

ACE FORM VII-A

I. HOURS/WEEK 1965__________

II. HOURS/WEEK 1970__________

FLORIDA STUDY OF HIGHER EDUCATION FACILITIES
COMPUTATION OF SPACE NEEDS FOR THE YEAR 1970
SENIOR COLLEGES AND UNIVERSITIES

1965 DATA			Space Factor	Needed Space 1965	Projection Ratio to 1970	19 Sp Ca
H. ADMINISTRATIVE FACILITIES	Item III:		8.00		Item V	
J. OTHER INSTRUCTION RELATED	Item III:		6.00		Item V	
K. STUDENT STUDY FACILITIES						
L. RESEARCH FACILITIES						
TOTAL INSTRUCTION RELATED						

TOTAL (NET): LIBRARY-INSTRUCTION + INSTRUCTION RELATED						
TOTAL GROSS SPACE NEEDS	Total Net:		1.50			

LORIDA STUDY OF HIGHER EDUCATION FACILITIES
OMPUTATION OF SPACE NEEDS FOR THE YEAR 1970
SENIOR COLLEGES AND UNIVERSITIES

INSTITUTION # ____________
III. F.T.E. 1965 ____________
IV. F.T.E. 1970 ____________
V. PROJECTION RATIO

	Space Factor	Needed Space 1965	Projection Ratio to 1970	1970 Space Calculation	Current Space Available	Deficit for 1970 sq.ft.
	[redacted]		Item V			
	6.00		Item V			

	1.50					

ACE FORM VIII

I. HOURS/WEEK 1965 ______________

II. HOURS/WEEK 1970 ______________

FLORIDA STUDY OF HIGHER EDUCATION FACILITIES

COMPUTATION OF SPACE NEEDS FOR THE YEAR 1970

JUNIOR COLLEGES

	20/400 Sq. Ft.	40/720 Sq. Ft.	60/1200 Sq. Ft.	100/
A. ADDITIONAL CLASSROOMS NEEDED				
	1600 Sq. Ft.			
B. ADDITIONAL TEACHING LABS NEEDED				

1 9 6 5 DATA		Space Factor	Needed Space 1965	Projection Ratio to 1970	1970 Space Calcu
C. INDOOR PHYSICAL EDUCATION 5% of Item I. Above		Variable Factor		Item V	
D. FACULTY OFFICE SPACE (total)		80.00		Item V	
1. To 420 FTE/12=Faculty =					
2. FTE - 420/15=Faculty =					
E. LIBRARY (Main) 1. Reading Rooms		6.25			
2. Carrels For 2% of FTE Students		20.00			
3. Library Service 1/3 of Lines 1 & 2					
4. Stack Space Volumes:		.10			
SUB-TOTAL MAIN LIBRARY					
BRANCH LIBRARY FACILITIES					
GRAND TOTAL LIBRARY				Item V	
F. SERVICE AREAS FOR TEACHING FACILITIES Total A + B:		.16			
G. OTHER TEACHING FACILITIES Item III:		2.00		Item V	
TOTAL LIBRARY & INSTRUCTION					

ORIDA STUDY OF HIGHER EDUCATION FACILITIES
MPUTATION OF SPACE NEEDS FOR THE YEAR 1970
JUNIOR COLLEGES

INSTITUTION # ____________
III. F.T.E. 1965____________
IV. F.T.E. 1970____________
V. PROJECTION RATIO

/400 Sq. Ft.	40/720 Sq. Ft.	60/1200 Sq. Ft.	100/1600 Sq. Ft.	200/2000 Sq. Ft.

00 Sq. Ft.

	Deficit for 1970 sq.ft.
A. CLASSROOMS	
B. TEACHING LABS	

	Space Factor	Needed Space 1965	Projection Ratio to 1970	1970 Space Calculation	Currect Space Available	
	Variable Factor		Item V			
	80.00		Item V			
	6.25					
	20.00					
	.10					
			Item V			
	.16					
	2.00		Item V			

ACE FORM VIII-A

I. HOURS/WEEK 1965 ____________

II. HOURS/WEEK 1970 ____________

FLORIDA STUDY OF HIGHER EDUCATION FACILITIES

COMPUTATION OF SPACE NEEDS FOR THE YEAR 1970

JUNIOR COLLEGES

1965 DATA		Space Factor	Needed Space 1965	Projection Ratio to 1970	19 Sp Ca
H. ADMINISTRATIVE FACILITIES (Faculty equivalent)=		290		Item V	
1. Admin. = Faculty/8 =					
2. S.P.W. = Faculty/20 =					
3. President (one office @ 290					
J. OTHER INSTRUCTION RELATED Item III:		2.00		Item V	
K. STUDENT STUDY FACILITIES					
L. RESEARCH FACILITIES					
TOTAL INSTRUCTION RELATED					

TOTAL (NET): LIBRARY-INSTRUCTION + INSTRUCTION RELATED					
TOTAL GROSS SPACE NEEDS Total Net:		1.52			

LORIDA STUDY OF HIGHER EDUCATION FACILITIES
MPUTATION OF SPACE NEEDS FOR THE YEAR 1970
JUNIOR COLLEGES

INSTITUTION # ________________
III. F.T.E. 1965________________
IV. F.T.E. 1970________________
V. PROJECTION RATIO ____________

	Space Factor	Needed Space 1965	Projection Ratio to 1970	1970 Space Calculation	Current Space Available	Deficit for 1970 sq.ft.
	290		Item V			
				290		
	2.00		Item V			

	1.52					